

⑨ BUNDESREPUBLIK  
DEUTSCHLAND



DEUTSCHES  
PATENTAMT

⑫ Offenlegungsschrift  
⑩ DE 195 44 304 A 1

⑤ Int. Cl. 6:  
G 06 F 17/30  
G 06 F 3/12

⑳ Aktenzeichen: 195 44 304.7  
㉑ Anmeldetag: 28. 11. 95  
㉒ Offenlegungstag: 23. 10. 97

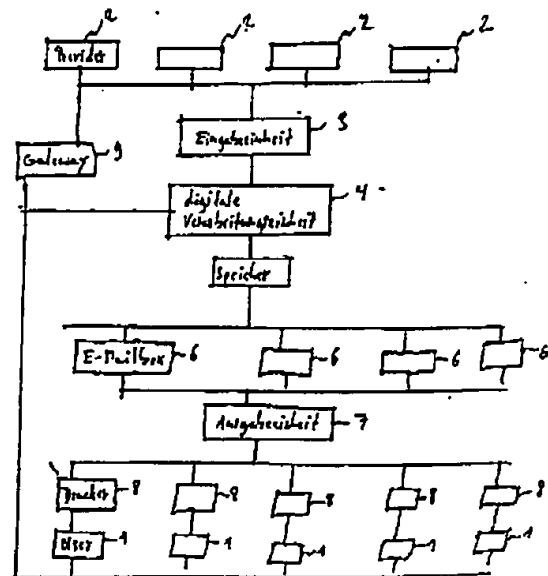
DE 195 44 304 A 1

㉔ Anmelder:  
Burda Holding GmbH & Co. KG, 77652 Offenburg, DE  
㉕ Vertreter:  
Schweizer und Kollegen, 81925 München

㉖ Erfinder:  
Kehler, Heinrich, Dr., 77554 Offenburg, DE

⑤4 Computersystem zum selektiven Ausdrucken von Informationen für Online-User

⑤7 Ein Computersystem zum selektiven Ausdrucken von Informationen für Online-User (1) verbindet eine Vielzahl von Providern (2) über eine Eingabeeinheit (3), eine digitale Verarbeitungseinheit (4), einen Speicher (5), eine Vielzahl von E-Mailboxen (6), eine Ausgabeeinheit (7), eine Vielzahl von lokalen Druckern (8) und Vertriebswegen mit einer Vielzahl von Online-Usern (1). Die Online-User (1) sind über Leitungen sowohl mit der digitalen Verarbeitungseinheit (4) als auch über ein Gateway (9) mit den Providern (2) verbunden. Die Online-User (1) können der digitalen Verarbeitungseinheit (4) ein Anforderungsprofil für Informationen übermitteln, wobei die digitale Verarbeitungseinheit (4) die entsprechenden Informationen von den Providern (2) anfordert und über den betreffenden Drucker (8) zum Ausdruck bringt. Die Online-User können aber auch über das Gateway (9), das die Adressenwahl vereinfacht, direkt aus den Informationsbestand der Provider (2) auswählen. Die entsprechende Information wird dann vom betreffenden Provider (2) in die Eingabeeinheit (3) eingegeben und schließlich vom betreffenden Drucker (8) über die beschriebene Verbindung ausgedruckt.



DE 195 44 304 A 1

Die folgenden Angaben sind den vom Anmelder eingereichten Unterlagen entnommen  
BUNDESDRUCKEREI 08.97 702 043/2

7/23

DE 195 44 304 A1

1

## Beschreibung

Das allgemeine Informationsbedürfnis der Menschen wird von den Massenmedien erfüllt. Aus wirtschaftlichen und technischen Gründen konnte dabei bisher nicht auf das Individuum "Mensch" eingegangen werden. Durch die digitale Revolution kann heute diese Einschränkung mit innovativen Strategien aufgehoben werden.

Der Wunsch nach Individualisierung der Information begründet sich in der Fülle des ständig wachsenden Informationsangebots:

Anzeigen- und Akzidenzkunden wollen eine Individualisierung der Informationsverbreitung zur Steigerung der Effektivität ihres Ressourceneinsatzes (Geldeinsparung). Die Endverbraucher möchten ebenfalls ein individuelles Produkt zur gezielten, effektiven Informationsaufnahme (Zeit- und Geldeinsparung).

Dabei ist unter Individualisierung sowohl ein individueller Informationsinhalt als auch ein individuelles Übertragungsmedium zu verstehen.

Das Projekt "Diversifikation" mit dem Arbeitstitel "Private Printing für Online User" realisiert in idealtypischer Art und Weise diese Forderung nach Individualisierung des Informationsbedürfnisses. Drucken zeigt sich hier als integraler Bestandteil der digitalen Kommunikation. Es umfaßt das gesamte Prozeß-Know-How zur Verwirklichung des zukünftigen individuellen Industriedrucks.

Im folgenden wird der digitale Prozeß exemplarisch am Beispiel eines Online-Services dargestellt.

Die heutige Situation im Online-Markt stellt sich folgendermaßen dar: Der User findet ein unübersichtliches, nahezu unbegrenztes und ständig wachsendes Informationsangebot mit zeitraubenden Verzweigungsstrukturen und langsamen Transferraten vor. Gleichzeitig ist sein Übertragungsmedium ein in der Regel stationärer, ermüdender Screen. Zudem erkennt der User seine Zeit zunehmend als kostbarstes Gut.

Unser Servicebeispiel (siehe Chart der Anlage) zeigt eine Möglichkeit auf, die Chancen dieser Situation zu nutzen. Es bietet dem User als Mehrwert sowohl Kosten- als auch Zeitersparnis. Die Dienstleistung besteht in der individuellen Informationszusammenstellung und ihrer Bereitstellung als ansprechend aufbereitetes Digital-Print-Produkt. Gleichzeitig wird ein sogenanntes Gateway geschaffen, das den gezielten, komfortablen und schnellen Zugriff auf zusätzliche Online-Informationen erlaubt. Diesem Instrument wird insbesondere die Werbeindustrie ein besonderes Augenmerk schenken, da es in idealer Weise ihrer Forderung nach meßbarem Werbeerfolg nachkommt.

"Private Printing für Online User" ist ein reines Serviceangebot in den Online-Diensten. Das Unternehmen ist somit kein Content-Anbieter.

Die einzelnen Verfahrenskomponenten werden im folgenden zur Prüfung ihrer einzelnen bzw. kombinierten Schutzfähigkeit dargestellt:

## (a) Individuelle Informationszusammenstellung

Das Hauptziel der individuellen Informationszusammenstellung ist die kundenorientierte Rationalisierung der Informationsüberflutung im Sinne des Users und der werbetreibenden Industrie.

Die Informationsselektion bzw. -zusammenstellung erfolgt auf 4 Wegen:

2

— Der User ruft aktiv gedruckte Information während des "Surfens" ab.

— Der User gibt sein persönliches Profil vor, nach dem die Information für ihn prioritätenorientiert automatisch selektiert wird. Beispielsweise möchte er in jedem Falle die Headlines aus dem Politikteil der FAZ (Priorität 1), die Wirtschaftsmeldungen aus dem Handelsblatt zum Thema "Multimedia" und "Telekommunikation" (Priorität 1), alle kommenden FOCUS-Artikel zum Thema "Gehirnforschung" (Priorität 2) und die aktuelle Titelstory der BUNTE (Priorität 3),...

— Des weiteren wird dem User ein persönlicher Guide als Bestandteil des Printprodukts zur Verfügung gestellt. Dieser dient als Orientierungshilfe in der Online-Angebotsfülle.

— Über das User-Profil und der weiteren, freiwilligen Angaben zu seiner Person (Alter, Beruf, männlich/weiblich, ...) werden dem Printprodukt gezielt Werbeanzeigen (Gesamtanteil: maximal 25%) oder auch individuell nützliche Zusatzinformationen hinzugefügt. Diese User-Database in Verbindung mit der digitalen Informationsverbreitung eröffnet dem Marketing bzw. der werbetreibenden Industrie bisher ungeahnte Möglichkeiten für den effektiven Einsatz ihrer Ressourcen.

Die Datenbank beinhaltet somit im wesentlichen folgende Inhalte:

— Content-Daten:

Unsere Dienstleistung bietet Content-Providern einen attraktiven Absatzmarkt. Ziel ist die Aufnahme aller bedeutenden Objekte wie FAZ, FOCUS, Times, Bunte,...

— Sensible User-Daten, die vor unbefugtem Zugriff zu schützen sind.

## (b) "Informatik-Layout"

Das Layout der zusammengestellten Information wird durch einen Computeralgorithmus vollautomatisiert ansprechend aufbereitet.

## (c) Datenfernübertragung (DFÜ)

Es ist beabsichtigt, die DFÜ-Kosten durch die Nutzung von Cooperated Networks oder der Netze der Online-Dienste zu minimieren.

## (d) Electronic Cash/Abrechnung

Unserer Dienstleistung wird zumindest in den ersten Projektphasen die Methode der "Bankabbuchung" in ausreichendem Maße gerecht werden. Denkbare Alternativen sind Kreditkarte, EC-Karte und "aufladbare" Karten. Hier gilt es insbesondere die weitere Marktentwicklung auf dem Gebiet künftiger Abrechnungs- und Verschlüsselungssysteme zu beobachten. Sinnvoll wäre insbesondere die Herauskristallisierung eines universellen und sicherheitsgewährleistenden Systems für Online und Pay-TV (vermutlich auf Hardwarebasis).

## (e) Digital Print

Der Druck des individuellen Auflage-1-Produkts findet seine Realisierung im Digital Print. Diese Technologie erfährt derzeit eine rasante Weiterentwicklung, die

DE 195 44 304 A1

3

künftig die erforderlichen Kapazitäten und Leistungsdaten bei vertretbaren Printkosten bereitstellen kann. Sie eignen sich insbesondere für den distributiven Druck. Die derzeitige Marktentwicklung zeigt die wachsende Gründung von vernetzten "Print Shops". Eine Nutzung dieser Geräte während der Nachtstunden durch unser Unternehmen steigert deren Auslastung bzw. Wirtschaftlichkeit, die eine attraktive Preisgestaltung ermöglicht.

#### (f) Vertrieb

Die Zustellung des individuellen, digitalen Print-Produkts hat angemessen schnell, zuverlässig und preisgünstig vom Druckort zum User zu erfolgen. Aus diesem Grunde wird der dezentrale, distributive Druck in unmittelbarer Nähe von entsprechenden Vertriebsverteilzentren angestrebt. Für die Ballungsräume bietet sich aufgrund der Kosten- und Infrastruktur die Mitnahme unseres vertriebsgerecht aufbereiteten Printprodukts durch den Zeitungsvertrieb an. Randgebiete werden voraussichtlich über die Post, Kurier- oder einen alternativen Zustelldienst befördert. Die Art der Zustellung wählt der User preisgesteuert über seine Zustelltermingabe bzw. der Vorgabe der Versandart. Des Weiteren gibt der User die Erscheinungshäufigkeit und den maximalen Umfang (kosten- und/oder seitenorientiert) seiner individuellen Informationszusammenstellung vor.

#### (g) Gateway Page

Die "Gateway Page" ist ein ganz besonderer Highlight unseres Serviceangebots: Es stellt im Prinzip einen "roten Teppich" vom Online User zum Content-Provider und zum Anzeigenkunden dar. Diese haben die Möglichkeit, für über das Print-Produkt hinausgehende Information dem User eine Online-Adresse mitzuteilen. Diese meist sehr unkomfortablen und umfangreichen Adressen (z. B. <http://www.lastminute.de/last/var/hotels/MIR/MIR024.htm>) werden durch uns entsprechend aufbereitet. Der User findet auf seiner "Gateway Page" in unserem Online-Service (Seiten in einem Online-Dienst) Buttons vor, die mit der jeweiligen Adresse hinterlegt sind. Durch das alleinige Anklicken gelangt der User schnell und bequem zum Anbieter. Diese für die Anbieter erfolgreichen Kontakte sind meßbar und entsprechend vergütbar. Damit steht sowohl dem User als auch dem Content-provider und der werbetreibenden Industrie ein einzigartiges Instrument zur Verfügung.

Mit den 2 Evolutionsprojekten findet "Private Printing für online User" zwei ideale Kombinationsvarianten:

- Das Projekt "PrePress" realisiert den universellen Einsatz der individuellen, digitalen Informationen, so daß User und Anzeigenkunde nun auch ihr individuelles Übertragungsmedium wählen können.
- Das Projekt "Selective Publishing" ermöglicht mit seinen Technologien anhand von Database Marketing die Bildung ökonomischer Gruppeneinheiten. Diese erlauben eine Kombination des Digital Prints mit anderen wirtschaftlicheren, konventionellen Massendruckverfahren durch eine individualisierte Weiterverarbeitung.

Es ist Aufgabe der vorliegenden Erfindung, ein Com-

4

putersystem bereit zustellen, das einerseits das selektive Ausdrucken von Informationen ermöglicht, die über ein Anforderungsprofil erhältlich sind, das ein Online-User in das Computersystem eingibt, und andererseits einen einfachen Zugang vom Online-User zu den Providern ermöglicht, um von diesen direkt ausdruckbare Informationen zu erhalten.

Diese Aufgabe wird durch die Merkmale vom Patentanspruch gelöst.

- 10 Im einzelnen wird das erfindungsgemäße Computersystem durch die Zeichnung verständlich, in der Fig. 1 ein Blockschaltbild des Computersystems zeigt, und

Fig. 2 ein vereinfachtes Blockschaltbild des Computersystems zeigt.

In Fig. 1 sind die Provider über die Eingabeeinheit 3 mit der digitalen Verarbeitungseinheit 4 verbunden. Die Einheit 4 ist wiederum mit dem Speicher 5 verbunden, der seinerseits mit einer Vielzahl von E-Mailboxen 6 verbunden ist. Von den E-Mailboxen 6 führen wiederum Leitungen zur Ausgabereinheit 7, die mit einer Vielzahl von lokalen Druckern 8 verbunden sind, von denen Vertriebswege zu den Online-Usern führen. Die Online-User 1 sind über Leitungen sowohl mit der digitalen Verarbeitungseinheit 4 als auch mit dem Gateway 9 verbunden. Über die Leitung zur digitalen Verarbeitungseinheit 4 übermittelt der Online-User ein Anforderungsprofil für Informationen, die dann durch die digitale Verarbeitungseinheit 4 von den Providern 2 angefordert und zum Ausdruck durch einen der Drucker 8 gebracht werden. Die Leitung über das Gateway 9 führt direkt vom Online-User zu den Providern 2, wobei das Gateway 9 die Adressenwahl vereinfacht. Der Online-User 1 kann nun aus dem gesamten Informationsbestand den Provider 2 auswählen und diese dazu veranlassen, die gewünschte Information in die Eingabeeinheit 3 einzugeben, von wo aus sie über die digitale Verarbeitungseinheit 4, den Speicher 5, eine E-Mailbox 6 und die Ausgabereinheit 7 auf den betreffenden Drucker 8 gerät.

In Fig. 2 sind die Zusammenhänge vereinfacht dargestellt.

#### Patentanspruch

Computersystem zum selektiven Ausdrucken von Informationen für Online-User (1) mit einem mit einer Vielzahl von Providern (2) verbundenen Eingabeeinheit (3), einer mit der Eingabeeinheit (3) verbundenen digitalen Verarbeitungseinheit (4), einem mit der digitalen Verarbeitungseinheit (4) verbundenen Speicher (5), einer Vielzahl von mit dem Speicher (5) verbundenen E-Mailboxen (6), einer mit den E-Mailboxen (6) verbundenen Ausgabereinheit (7), einer Vielzahl von mit der Ausgabereinheit verbundenen lokalen Druckern (8), wobei die Drucker (8) über einen Vertriebsweg jeweils mit den Usern (1) verbunden sind, die ihrerseits über eine Leitung mit der digitalen Verarbeitungseinheit (4) und über ein Gateway (9) mit den Providern (2) verbunden sind, bei dem einerseits die User (1) gedruckte Information über ihre Verbindung mit der digitalen Verarbeitungseinheit (4) abrufen, die über ein Programm für die digitale Verarbeitungseinheit (4) über die Eingabeeinheit (3) von den Providern (2) angefordert wird und andererseits die User (1) zusätzliche Informationen über das Gateway (9) von den Providern anfordern, wobei das Gateway

DE 195 44 304 A1

5

6

(9) die Verbindung von den Usern (1) mit den Providern (2) über eine Adressvereinfachung herstellt und die Information wieder über die Eingabeeinheit (3) zur digitalen Verarbeitungseinheit (4), von dort über den Speicher (5), über die E-Mailboxen (6) und die Ausgabeeinheit (7) zu den Druckern (8) gelangt.

Hierzu 2 Seite(n) Zeichnungen

10

15

20

25

30

35

40

45

50

55

60

65

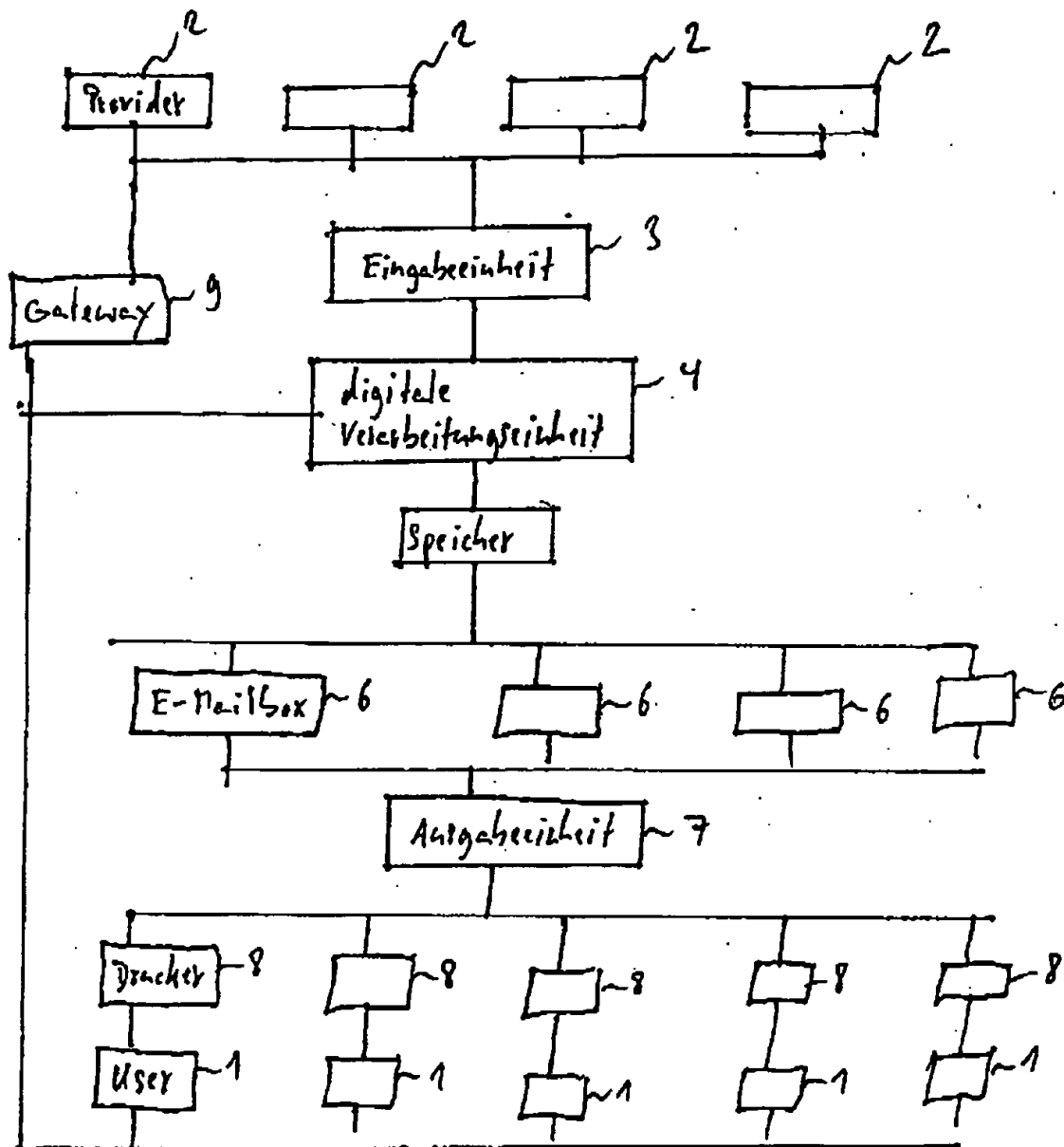


Fig. 1

ZEICHNUNGEN SEITE 2

Nummer:

DE 195 44 304 A1

Int. Cl.:

G 06 F 17/30

Offenlegungstag:

23. Oktober 1997

# Private Printing für Online User

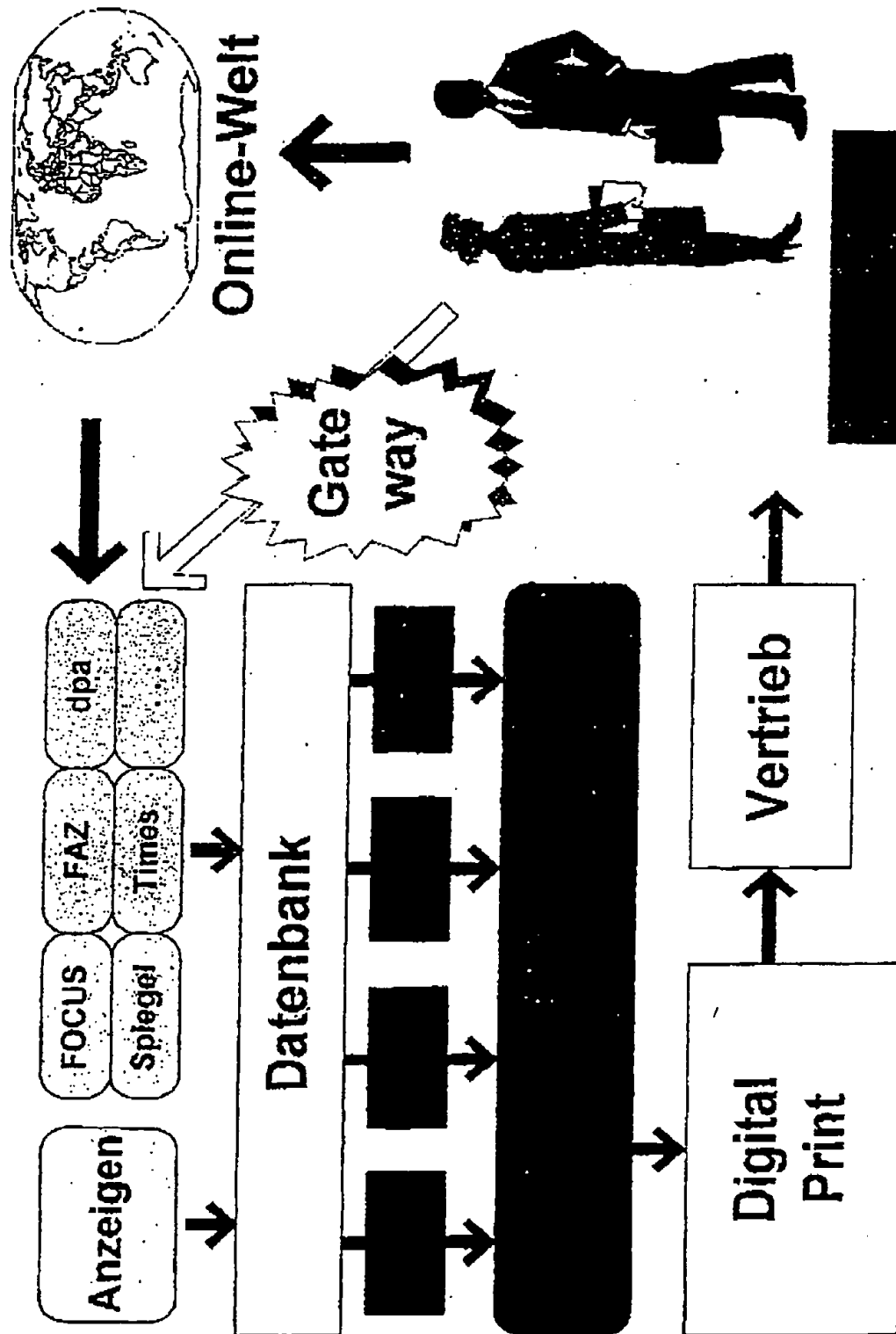


Fig. 2

702 043/2

(19)



JAPANESE PATENT OFFICE

## PATENT ABSTRACTS OF JAPAN

(11) Publication number: **11232267 A**(43) Date of publication of application: **27.08.99**

(51) Int. Cl.  
**G06F 17/21**  
**G06F 17/24**  
**G06F 17/30**

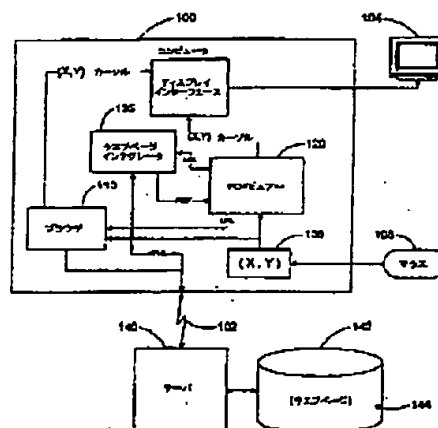
(21) Application number: **10325495**(22) Date of filing: **16.11.98**(30) Priority: **14.11.97 US 97 970743**(71) Applicant: **ADOBE SYST INC**(72) Inventor: **SWEET RICHARD ERIC**  
**ROWE EDWARD ROYCE WARREN**(54) **CAPTURE OF UNPAGED HYPERTEXT IN PAGED DOCUMENT**

COPYRIGHT: (C)1999,JPO

## (57) Abstract

**PROBLEM TO BE SOLVED:** To integrate plural web pages described by semantic markup language into a single paged document described by physical markup language by converting the semantic markup expression of a document into the physical markup expression of the document.

**SOLUTION:** Logical minimum width equal to minimum width necessary for displaying all screen objects in a document by their normal sizes is calculated. A physical markup expression having the same width as the logical minimum width is generated by the physical markup expression of the document and suited to target size including target width. In this case, the physical markup expression is scaled by a scaling coefficient derived from the element ratio of the target size to the logical minimum width. For instance, a web page integrator 135 integrates a requested document into a single PDF document and then displays the integrated document by a PDF viewer 120.



**\* NOTICES \***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**CLAIMS**

---

**[Claim(s)]**

[Claim 1] In the method of changing semantics-markup expression of a document into physical markup expression of this document The logical minimum width of face equal to the minimum width of face needed in order to display all the screen objects in a document with those usual sizes is calculated. Physical markup expression which is physical markup expression of the aforementioned document and has the width of face same at least as the aforementioned physical minimum width of face is created. The aforementioned physical markup expression is fitted to the target size containing target width of face. In this case, the method characterized by having each above-mentioned step to which the scaling of the width of face of the aforementioned physical markup expression is carried out with the scaling coefficient derived from the ratio of the element of the aforementioned target size to the aforementioned logical minimum width of face.

[Claim 2] The method characterized by incorporating further in a claim 1 in the document which newly created the aforementioned physical markup expression.

[Claim 3] The method further characterized by incorporating the aforementioned physical markup expression in the existing document in a claim 1.

[Claim 4] The method characterized by the aforementioned element of the aforementioned target size being target width of face in a claim 1.

[Claim 5] The method that the aforementioned physical markup expression is characterized by being expression containing the page in which each had each physical width of face and each physical height which carried out page attachment in a claim 1.

[Claim 6] The method characterized by the aforementioned target size containing target height in a claim 5.

[Claim 7] The method characterized by the aforementioned target size being a standard paper size in a claim 6.

[Claim 8] The method characterized by being one of whose paper sizes of the aforementioned standard being 8.5x11 inches, 8.5x14 inches, A4, A5, and 11x17 inches in a claim 7.

[Claim 9] The method characterized by the page of the aforementioned physical markup expression having the same aspect ratio as the aforementioned target size in a claim 6.

[Claim 10] The method that the step to which the aforementioned physical markup expression is fitted is further characterized by carrying out the scaling of the height of the aforementioned physical markup expression with the aforementioned scaling coefficient in a claim 5.

[Claim 11] The method characterized by carrying out the scaling of the page height of the aforementioned physical markup expression with the aforementioned scaling coefficient in a claim 10 when carrying out the scaling of the height of the aforementioned physical markup expression with the aforementioned scaling coefficient.

[Claim 12] The method characterized by the aforementioned element of the aforementioned target size being target height in a claim 6.

[Claim 13] The method characterized by rotating only + or -90 degrees of pages of the aforementioned physical markup expression in a claim 6 when it fits the aforementioned physical markup expression.

[Claim 14] The method further characterized by testing whether it is under the threshold that the ratio of the aforementioned target width of face to the aforementioned logical minimum width of



face pinpointed in a claim 13 when it fits the aforementioned physical markup expression to the aforementioned target width of face.

[Claim 15] The method characterized by the aforementioned document being the frame set which specifies two or more frames in a claim 1.

[Claim 16] The method characterized by having each above-mentioned step which the aforementioned document has at least one hypertext link, and the aforementioned physical markup expression is further displayed in a viewer, and it accesses to an external document in a claim 1 when this method is chosen from the markup by which an indication of the hypertext link was given [ aforementioned ] by the user.

[Claim 17] The method characterized by the aforementioned hypertext link being a server side image map in a claim 16.

[Claim 18] The method characterized by the aforementioned semantics-markup expression being HTML in a claim 1.

[Claim 19] The method characterized by the aforementioned physical markup expression being PDF in a claim 1.

[Claim 20] The method further characterized by having each above-mentioned step which carries out the scaling of the aforementioned physical markup expression by the inverse number of the aforementioned scaling coefficient, and displays the result in a viewer in a claim 1 after fitting the aforementioned physical markup expression to the aforementioned target size.

[Claim 21] The first document which is expressed with physical markup expression and includes at least one hypertext link in the method of displaying hyper-text data is displayed in a viewer. When a hypertext link is chosen from the first document which gave [ aforementioned ] an indication by the user, it accesses to an external document. The method characterized by having each above-mentioned step which changes semantics-markup expression of the aforementioned external document into physical markup expression, and incorporates physical markup expression of the aforementioned external document in the first document of the above.

[Claim 22] The method characterized by modifying a hyperlink in a claim 21 in order to carry out the point to physical markup expression of the aforementioned external document.

[Claim 23] The method further characterized by saving the original state of the aforementioned hypertext link in a claim 22.

[Claim 24] The method characterized by returning the hyperlink which was carrying out the point to the state of the origin of it to the portion which answered further operation which deletes a part of first document of the above, and carried out [ aforementioned ] deletion in the claim 23.

[Claim 25] The method characterized by having each above-mentioned step which summarizes the aforementioned external document, creates the digest of the aforementioned external document further in a claim 21, and tests the aforementioned digest of the aforementioned external document in order to determine whether physical markup expression of the aforementioned external document is already incorporated in the first document of the above.

[Claim 26] The method characterized by the aforementioned external document having main documents, one piece, or the auxiliary document beyond it in a claim 21.

[Claim 27] The method characterized by having each above-mentioned step which summarizes each auxiliary document, creates each auxiliary document digest further in a claim 26, and tests the digital digest of each auxiliary document in order to determine whether physical markup expression of the aforementioned external document is already incorporated in the first document of the above.

[Claim 28] The method characterized by the aforementioned digital digest being a compound digest in a claim 25.

[Claim 29] How to carry out having each above-mentioned step which summarizes each auxiliary document, creates each auxiliary document digest, and creates the identifier for distinction in the method of forming the identifier for distinction of the meeting of data which has main documents, one piece, or an auxiliary document beyond it by summarizing connection in all the auxiliary document digests of the aforementioned main documents as the feature.

[Claim 30] The method that the aforementioned step which carries out a summary is characterized by applying a digital digest algorithm in a claim 29.

[Claim 31] The method characterized by the aforementioned digital digest algorithm being an MD5 message digest algorithm in a claim 30.

[Claim 32] The method characterized by to have each above-mentioned step which searches only the document of others which include the document which searches the document of the aforementioned beginning, and the transitive link exists from the document of the aforementioned beginning to other documents in the method of searching the document transitively linked to the document of the beginning on a hierarchical file system, and has all the aforementioned transitive links in the same directory path as the document of the aforementioned beginning.

**[Claim 33]** The method characterized by distributing the aforementioned hierarchical file system on a network in a claim 32.

**[Claim 34]** The method characterized by distributing the aforementioned hierarchical file system on the Internet in a claim 32.

[Claim 35] In the computer program which exists on the medium in which read is possible by computer for changing semantics-markup expression of a document into physical markup expression of the aforementioned document The logical minimum width of face equal to the minimum width of face needed in order to carry out a computer and to display all the screen objects in the aforementioned document with those usual sizes is made to calculate. Physical markup expression which is physical markup expression of the aforementioned document and has the width of face same at least as the aforementioned logical minimum width of face is made to create. The instruction to which the aforementioned physical markup expression is fitted to the target size containing a target size and to which it has each above-mentioned instruction, a computer is carried out, and the aforementioned physical markup expression is fitted carries out a computer. The computer program characterized by having the instruction to which the scaling of the width of face of the aforementioned physical markup expression is carried out with the scaling coefficient derived from the ratio of the element of the aforementioned target size to the aforementioned logical minimum width of face.

[Claim 36] The computer program which carries out a computer and is further characterized by having the instruction made to incorporate in the document which newly created the aforementioned physical markup expression in a claim 35.

[Claim 37] The computer program which carries out a computer and is further characterized by having the instruction which makes the aforementioned physical markup expression incorporate in the existing document in a claim 35.

[Claim 38] The computer program characterized by the aforementioned element of the aforementioned target size being target width of face in a claim 35.

[Claim 39] The computer program characterized by being expression whose aforementioned physical markup expression contains two or more pages in which each had each physical width of face and each physical height in a claim 35, and which carried out page attachment.

[Claim 40] The computer program characterized by the aforementioned target size including target height in a claim 39.

**[Claim 41]** The computer program characterized by the aforementioned target size being a standard paper size in a claim 40.

**[Claim 42] The computer program characterized by being one of whose paper sizes of the  
aforementioned standard being 8.5x11 inches, 8.5x14 inches, A4, A5, and 11x17 inches in a claim  
41.**

[Claim 43] The computer program characterized by the page of the aforementioned physical markup expression having the same aspect ratio as the aforementioned target size in a claim 40.

[Claim 44] The computer program characterized by having the instruction to which the instruction to which a computer is carried out and the aforementioned physical markup expression is fitted in a claim 39 carries out a computer, and carries out the scaling of the height of the aforementioned physical markup expression with the aforementioned scaling coefficient.

[illegible]

[Claim 46] The computer program characterized by the aforementioned element of the aforementioned target size being target height in a claim 40.

[Claim 47] The computer program to which the instruction to which the aforementioned computer is carried out and physical markup expression is fitted in a claim 40 carries out a computer, and is characterized by having the instruction made to rotate only + or -90 degrees of pages of the aforementioned physical markup expression.

[Claim 48] The computer system which the instruction to which the aforementioned computer is carried out and the aforementioned physical markup expression is fitted to the aforementioned target size in a claim 47 carries out a computer, and is characterized by having the instruction which makes it test whether it is under the threshold that the ratio of the aforementioned target width of face to the aforementioned logical minimum width of face pinpointed.

[Claim 49] The computer program characterized by the aforementioned document being the frame set which specifies two or more frames in a claim 35.

[Claim 50] The computer program characterized by having each above-mentioned instruction which carries out a computer further and is made to display the aforementioned physical markup expression in a viewer, and it makes for the aforementioned document to have at least one hypertext link, and access to an external document in a claim 35 when a hypertext link is chosen from the markup by which an indication was given [ aforementioned ] by the user.

[Claim 51] The computer program characterized by the aforementioned hypertext link being a server side image map in a claim 50.

[Claim 52] The computer program characterized by the aforementioned semantics-markup expression being HTML in a claim 35.

[Claim 53] The computer program characterized by the aforementioned physical markup expression being PDF in a claim 35.

[Claim 54] The computer program characterized by having each above-mentioned instruction which carries out the scaling of the aforementioned physical markup expression, and displays the aforementioned result in a viewer by the inverse number of the aforementioned scaling coefficient after carrying out a computer and fitting the aforementioned physical markup expression to the aforementioned target size further in a claim 35.

[Claim 55] In the computer program which exists by computer on the medium in which read is possible The first document which carries out a computer, and is expressed by physical markup expression, and includes at least one hypertext link is displayed in a viewer. When chosen from the first document with which an indication of the hypertext link was given [ aforementioned ] by the user, it is made to access to an external document. The computer program characterized by having each above-mentioned step which transforms the aforementioned semantics-markup expression of the aforementioned external document to physical markup expression, and makes physical markup expression of the aforementioned external document incorporate in the first document of the above.

[Claim 56] The computer program characterized by having the instruction which makes a hypertext link correct so that a computer may be carried out and the point may be further carried out to physical markup expression of the aforementioned external document in a claim 55.

[Claim 57] The computer program which carries out a computer and is further characterized by having the instruction where the original state of the aforementioned hypertext link is made to save in a claim 56.

[Claim 58] The computer program which carries out a computer and is further characterized by having the instruction which returns the hypertext link which was carrying out the point to the portion which answered operation which deletes a part of first document of the above, and carried out [ aforementioned ] deletion to the state of the origin of it in a claim 57.

[Claim 59] The computer program characterized by having each above-mentioned instruction which carry out a computer, summarize the aforementioned external document further in a claim 55, and the digest of the aforementioned external document is made to create, and makes the digest of the aforementioned external document test in order to determine whether the aforementioned physical markup expression of the aforementioned external document is already incorporated in the first document of the above.

[Claim 60] The computer program characterized by the aforementioned external document having a main document and one piece, or the auxiliary document beyond it in a claim 55.

[Claim 61] The computer program characterized by having each above-mentioned instruction which carry out a computer, summarize each auxiliary document further in a claim 60, and each auxiliary

document digest is made to create, and makes the digital digest of each auxiliary document test in order to determine whether physical markup expression of the aforementioned external document is already incorporated into the first document of the above.

[Claim 62] The computer program characterized by the aforementioned digital digest being a compound digest in a claim 59.

[Claim 63] In the computer program which exists on the medium in which read is possible by computer for creating the identifier for distinction of the meeting of data which has main documents, one piece, or an auxiliary document beyond it In order to carry out a computer and to create each auxiliary document digest, each auxiliary document is made to summarize. The computer program characterized by having each above-mentioned instruction which makes the identifier for distinction create by summarizing connection in the aforementioned main documents and all auxiliary document digests.

[Claim 64] The computer program characterized by having the instruction to which an instruction [ make / summarize by carrying out the aforementioned computer in a claim 63 / it ] carries out a computer, and makes a digital digest algorithm apply.

[Claim 65] The computer program characterized by the aforementioned digital digest algorithm being an MD5 message digest algorithm in a claim 64.

[Claim 66] In the computer program which exists on the medium in which read is possible by computer for searching the document transitively linked to the document of the beginning on a hierarchical file system Carry out a computer, make the document of the aforementioned beginning search, and make only the document of others which include all the documents with which the transitive link from a document to the other documents of the aforementioned beginning exists, and it exists in the directory path as the document of the aforementioned beginning with the same aforementioned transitive link search. The computer program characterized by having each above-mentioned instruction.

[Claim 67] The computer program characterized by distributing the aforementioned hierarchical file system on a network in a claim 66.

[Claim 68] The computer program characterized by distributing the aforementioned hierarchical file system on the Internet in a claim 66.

---

[Translation done.]

**\* NOTICES \***

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

**DETAILED DESCRIPTION**

---

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention relates to the technology of capturing the hypertext web page for seeing conveniently.

[0002]

[Description of the Prior Art] World Wide Web ("web") of the Internet serves as a general means to announce document information in recent years. If it is common that the user who has access to a web especially browses through the meeting of the document linked by using hypertext browsers, such as Netscape Navigator (trademark) or Microsoft Internet EKUSUPUROARA (trademark); and a user chooses a certain screen object in the document currently displayed in that case, the content of another document will be searched and it will be displayed to a user.

[0003] Many of documents on a web are encoded using the markup language known as hypertext markup language (HTML). The HTML version 3.2 which has frame extension is indicated by the Graham work "a HTML source book (HTML Sourcebook)" published by the Wiley computer publishing in 1997, and the third edition. A markup language is, in order to describe how it should be displayed on display, such as a video screen or a printer, the code, i.e., the tag, of a possible lot of embedding in a document. HTML is known as a "semantics target" markup language. Although this can use HTML in order to set up a physical characteristic (for example, line spacing or a font size) with a document etc., many HTML tags mean that it is what only discriminates the logical feature of documents, such as a title, a paragraph, a list, and a table. The precise mode as which these logical features are displayed is left to browser software that it should determine when the document is displayed.

[0004] Since a HTML tag does not often specify the physical size which a document or its component fixed, the precise modality of the specific document displayed by the browser is often dependent on the size of the browser window where it is displayed. For example, drawing 1 and 2 show two views of the home web page of the U.S. Patent Office (the as uniform resource locator (URL) of September, 1997 is specified by <http://www.uspto.gov/>). In drawing 2, a web browser window is more remarkably [ than the thing in drawing 1 ] small, and as for the web page seen through these two windows, the overall modalities differ about the width of face of a title 30 and the list element 40 so that I may be understood.

[0005] I hear that one important feature of HTML can refer to external data resources, and it is in a HTML document. One method that such reference is used in HTML is discriminating the auxiliary document which is the generation source of the content which should be displayed as a part of display of the HTML document. For example, a HTML tag "IMG" specifies that the content of the picture document specified in the 1 circles of a display of the HTML document with which the IMG tag was found should be displayed. Similarly, it specifies that the "FRAME (frame)" tag in a HTML document should be displayed in the frame of the specification of the frame set by which the content of the specified document is demarcated with the HTML document. (The frame in HTML and use of a frame set are explained in detail later.)

HTML is characterized by it being still more possible to have a hypertext link in a HTML document. The hypertext link in a HTML document forms the relevance between a screen object (for example, a word or an image) and external resources. If a HTML document is displayed by the browser, a user

can choose the screen object and a browser will answer by searching and displaying the content from external resources. A hypertext link can be specified in a HTML document with the HTML support tag which has for example, a HREF attribute.

[0006] Use of such external reference in HTML makes easy distributed document storing on a Wide Area Network (WAN). It is possible to store as a document smaller than the lot's which divided the large-sized document and was logically associated by external reference. For example, it is common to store the graphical image in a HTML document as a separate document (setting to GIF or a JPEG format). Moreover, it is also common to store two or more sections of a big text as a separate document and to make it easy to move to another section from one section by using a hypertext link.

[0007] Furthermore, it is also possible to form the united whole which is made to link the document with which a lot exists beforehand with a HTML tag, and is consistent. For example, it is possible to make it easy to draw up the HTML document which includes a hypertext link to the document with which the lot relevant to the common theme exists beforehand, and to review such a document systematically by the user.

[0008] I hear that page attachment of this document is not carried out, and it has one feature of a HTML document. That is, when displayed by the browser used in order to see it, the "height" as which the HTML document was displayed is determined by only the array and amount of a screen object which are demarcated in it, and is not determined with any fixed page size in relation to the document. (In addition, a "page size" does not necessarily make reference in the thing of the physical page printed for example, on the form, and is only the property of the electronic document divided to a series of fields with the size which the content of the document fixed.) When the displayed document does not go into the height of a browser window, a browser makes it possible for a web page to scroll and to see an additional content. Although drawing 3 shows the home web page of the U.S. Patent Office currently displayed in the same browser window shown in drawing 2, the points which the page is scrolled a little and show an additional material differ.

[0009] It is possible to display the "frame" in which two or more scrolling is possible and in which a re-size setup is possible in a single browser window by extension made to the latest HTML. With a frame, it is demarcated with the HTML document special type known as a "frame set." A frame set gives the information which gives the size and orientation state of a frame in a window, and specifies the content of each frame. the content of one frame -- the content of a HTML document -- or it is possible to consider as a secondary frame set (namely, frame set with which the whole content appears in the single frame of a bigger frame set) The height or width of face of one frame can be specified in an absolute or relative meaning like the case of other HTML screen objects.

[0010] Drawing 4, and 5 and 6 have illustrated operation of the frame in HTML. Drawing 4 shows the browser window which shows the frame set containing two frames. A frame 50 is a narrow perpendicular column in the left-hand side of a screen. A frame 55 is a broad column rather than it is in the right-hand side of a frame 50. The frame 50 has the HTML document, it is the same length as the height of a browser window, and, on the other hand, the frame 55 has the much more bigger document than the height of a browser window. In order to display the remainder of the HTML document contained in a frame 55 so that I may be understood in drawing 5, as for a frame 50, it is [ a frame 55 ] possible to make it scroll in independent.

[0011] In the upper example, the frame 50 is demarcated as what has the fixed width of face which consists of 115 pixels, and, on the other hand, the width of face of a frame 55 is demarcated relatively [ width of face / of a frame 50 ], namely, the width of face is set as the thing and equal which deducted 115 pixels currently used by the frame 50 from the width of face of a browser window. When it is what has a smaller browser window so that I may be understood from drawing 6, a frame 55 is reduced according to it and, on the other hand, a frame 50 remains in the fixed width of face.

[0012] As explained above, the ultimate modality of the HTML document displayed by the browser is usually dependent on the size of the browser window (or frame) where it is displayed. Generally, a web browser extracts a series of screen objects (for example, a word, an image, a list, a frame, or a table) from a HTML document, and arranges them for every line sequentially on a screen. If one line becomes full, the following object will be arranged in the line following it. This process is continuously performed until all the screen objects in a HTML document are arranged.

[0013] However, the width of face of the HTML document with which this general principle was displayed is restricted by the constraint that it cannot consider as a thing smaller than the minimum width of face of the broadest screen object contained in it. When the minimum width of face of a certain screen object is still larger than the width of face of a browser window under this constraint and it sees through a browser window, it makes it possible for a part of the document to have separated from the screen (left or right), and to display a level scroll bar typically, and for a user to shift the view of the document to the left or the right.

[0014] A HTML screen object can have which [ whether it is fixed and / adjustable ] width of face. For example, the width of face of the single word of the text in a HTML document is being fixed (given by the font chosen by the browser for displaying it). The width of face is determined with the font size as which the character in the word and it are displayed. Similarly the width of face of the cell in a HTML table can be fixed by specifying the width of face clearly as a pixel of a certain number.

[0015] As contrasted with this, the width of face of an adjustable width-of-face screen object changes depending on the width of face of the browser window where it appears. However, even if it is an adjustable width-of-face screen object, it has the minimum width of face. For example, although the width of face of one paragraph of a text usually changes according to the size of a browser window, it cannot be made into a narrow thing rather than the broadest word contained in this paragraph. Similarly, although a table including an image can have the cell from which the width of face is demarcated in the relative meaning, it cannot make this table smaller than the sum of the width of face of the image in the broadest line in spite of it.

[0016] This constraint is illustrated to drawing 7, and 8, 9 and 10. In drawing 7 and each of 8 and 9, the same HTML document is displayed in the browser window 65. A part of HTML code which exists back [ the ] is shown in drawing 10. If drawing 7 and 10 are referred to, the document currently displayed includes the table 80 which has two cells with which the bottom is arranged. The header [ one cell 85 includes the client side image map, and / cell / of another side / 90 ] "US PATENT AND TRADEMARK OFFICE (U.S. Patent Office)", The horizontal line and the list which has the header "the new thing in a New - the PTO site; U.S. Patent Office site" and by which turn attachment is not carried out are included. In drawing 8, although a window 65 is narrow much more rather than it can set to drawing 7, it is broader than the minimum width of face of which object on a screen. Therefore, what each line of this document is adjusted similarly to the width of face of a window 65, and is hidden from the user in the right-hand side of a browser window does not have anything. A window 65 is [ in / drawing 9 / as contrasted with this ] narrow much more than the minimum width of face of a table 80. It is because the width of face (word of "TRADEMARK") of the broadest word in the fixed width-of-face + cell 90 of the image map in a cell 85 is still larger than the width of face of the browser window 65. Therefore, the display width of face of the document obtained as a result will be still broader than a window 65, and the portion by the side of the rightmost of this document will hide from a view.

[0017] Although the meeting of the visual indicative data on a web is typically stored as a set of the HTML document linked, it is common, and convenient. [ of making it store as a single document which had a fixed page size, for example using a physical markup language like a portable document format (PDF) ] PDF is indicated by the "portable document format reference manual (Portable Document Format Reference Manual)" AJISON UEZURI publishing company which is the publication of Adobe Systems and in condominium lei TEDDO, and the reference in 1993.

[0018]

[Problem(s) to be Solved by the Invention] this invention is made in view of the above point, cancels the fault of the \*\*\*\* conventional technology which mentioned above, and aims at offering the technology which made it possible to unify two or more web pages indicated by semantics-markup languages, such as HTML, into the single document which is indicated by physical markup languages, such as PDF, and which carried out page attachment. The place made into another purpose of this invention is offering the technology of capturing the hypertext in the document which carried out page attachment which has not carried out page attachment.

[0019]

[Means for Solving the Problem] Generally, in one side, this invention offers the method of changing

semantics-markup expression of one document into physical markup expression of this document.

This method calculates the logical minimum width of face equal to the minimum width of face required to express all the screen objects in a document as those usual sizes. Physical markup expression which is physical markup expression of this document and has the width of face same at least as this logical minimum width of face is created. And this physical markup expression is fitted to the target size containing target width of face, and the scaling of this physical markup expression is carried out in that case with the scaling coefficient derived from the ratio of the element of this target size to this logical minimum width of face. In the suitable example of this invention, it has more than one or it of the following features. This physical markup expression is incorporated in the document drawn up newly. This physical markup expression is incorporated into the existing document. This element of this target size is target width of face. This physical markup expression is expression which includes the page in which each had each physical width of face and each physical height and which carried out page attachment. This target size has target height. This target size is a standard paper size. The paper sizes of this standard are 8.5x11 inches, 8.5x14 inches, A4, A5, and 1 of 11x17 inches. The page of this physical markup expression has the same aspect ratio as a target size. The scaling of the height of this physical markup expression is carried out by this scaling coefficient. The scaling of the page height of this physical markup expression is carried out by this scaling coefficient. The element of this target size is target height. Only + or -90 degrees of pages of this physical markup expression rotate. The ratio of target width of face to the logical minimum width of face tests whether it is under the threshold that it pinpointed. This document is a frame set which specifies two or more frames. This document includes at least one hypertext link, this physical markup expression is displayed in a viewer, and an external document is accessed when a hypertext link is chosen from the displayed markup by the user. This hypertext link is a server side image map. This semantics-markup expression is HTML. This physical markup expression is PDF. After this physical markup expression suits to a target size, the scaling of this physical markup expression is carried out by the inverse number of this scaling coefficient, and the result is displayed in a viewer. [0020] Generally, in another side, this invention offers the method of displaying hyper-text data.

This method displays the first document which is expressed by physical markup expression in the viewer, and includes at least one hypertext link. When a hypertext link is chosen from the first this displayed document by the user, it accesses to an external document. What semantics-markup expression of this external document is changed into physical markup expression, and physical markup expression of this external document is incorporated for in this first document is included. The suitable example of this invention has more than one or it of the following features. A hypertext link is corrected so that the point may be carried out to physical markup expression of an external document. The original state of this hypertext link is saved. The hypertext link which answers operation which deletes a part of this first document, and carries out the point to the this deleted portion returns to the state of the origin of it. This external document is summarized, the digest of this external document is created, and the digest of this external document is tested in order to determine whether physical markup expression of this external document is already incorporated in this first document. This external document has main documents, one piece, or the auxiliary document beyond it. Each auxiliary document is summarized and creates each auxiliary document digest, and the digital digest of each auxiliary document is tested in order to determine whether physical markup expression of this external document is already incorporated in this first document. This digital digest is a compound digest.

[0021] Generally, in another side, this invention offers the method of forming the identifier for distinction of the meeting of data which has main documents, one piece, or an auxiliary document beyond it. This method includes creating the identifier for distinction by summarizing each auxiliary document, and creating each auxiliary document digest, and summarizing connection in these main documents and all auxiliary document digests. The suitable example of this invention has more than one or it of the following features. A digital digest algorithm is applied. This digital digest algorithm is an MD5 message digest algorithm.

[0022] Generally, in another side, this invention offers the method of searching the document transitively linked to the document of the beginning on a hierarchical file system. This method includes searching only the document of others which include the document which searches the



document of this beginning, and the transitive link from a document to the other documents of this beginning exists, and has all these transitive links in the same directory path as the document of this beginning. The suitable example of this invention has more than one or it of the following features. This hierarchical file system is distributed on the network. This hierarchical file system is distributed on the Internet.

[0023] It is the computer program which generally exists on the medium in which read is possible by computer for this invention changing semantics-markup expression of a document into physical markup expression of this document in another side. The logical minimum width of face equal to the minimum width of face required in order for this computer program to carry out a computer and to display all the screen objects in this document with those usual sizes is made to calculate. Physical markup expression which is physical markup expression of this document and had the width of face same at least as this logical minimum width of face is made to create. And the instruction to which this physical markup expression is fitted to the target size containing target width of face and to which it has each above-mentioned instruction, this computer is carried out, and physical markup expression is fitted carries out a computer. The computer program which has the instruction to which the scaling of the width of face of this physical markup expression is carried out with the scaling coefficient derived from the ratio of the element of a target size to this logical minimum width of face is offered. The suitable example of this invention has more than one or it of the following features. This program carries out a computer and has the instruction made to incorporate in the document which newly created physical markup expression. This program carries out a computer and has the instruction which makes physical markup expression incorporate in the existing document. This element of this target size is target width of face. This physical markup expression is expression which includes two or more pages in which each had each physical width of face and each physical height and which carried out page attachment. This target size includes target height. This target size is a standard paper size. The paper sizes of this standard are 8.5x11 inches, 8.5x14 inches, A4, A5, and 1 of 11x17 inches. The page of this physical markup expression has the same aspect ratio as this target size. This program has the instruction to which a computer is carried out and the scaling of the height of physical markup expression is carried out with a scaling coefficient. This program has the instruction to which a computer is carried out and the scaling of the page height of physical markup expression is carried out with this scaling coefficient. This element of this target size is target height. This program carries out a computer and has the instruction which rotates only + or -90 degrees of pages of physical markup expression. This program carries out a computer and has the instruction which makes it test whether it is under the threshold that the ratio of a target size to this logical minimum width of face pinpointed. This document is a frame set which specifies two or more frames. This document includes at least one hypertext link, and this program carries out a computer, and when a hypertext link is chosen from the markup which was made to display physical markup expression and was displayed in the viewer by the user, it has the instruction made to access to an external document. This hypertext link is a server side image map. This semantics-markup expression is HTML. This physical markup expression is PDF. After this program carries out a computer and fits this physical markup expression to a target size, it has the instruction which carries out the scaling of this physical markup expression by the inverse number of this scaling coefficient, and displays the result in a viewer. The first document which this program carries out a computer, and is expressed with physical markup expression in the viewer, and includes at least one hypertext link is displayed. When a hypertext link is chosen from the first displayed document by the user, it is made to access to an external document. It has the instruction in which transform semantics-markup expression of this external document to physical markup expression, and physical markup expression of this external document is made to include in this first document. It has the instruction which makes a hypertext link correct so that this program may carry out a computer and may carry out the point to physical markup expression of this external document. This program carries out a computer and has the instruction where the original state of this hypertext link is made to save. This program carries out a computer and has the instruction which recovers the hypertext link which answers deletion operation of a part of this first document, and is carrying out the point to the this deleted portion to the state of the origin of it. This program carries out a computer, summarizes this external document, makes the digest of this external document create, and in order

to determine whether physical markup expression of this external document is already incorporated in this first document, it has the instruction which makes the digest of this external document test. This external document has main documents, one piece, or the auxiliary document beyond it. This program has the instruction which makes the digital digest of each auxiliary document test, in order to determine whether carry out a computer, summarize each auxiliary document, and make each auxiliary document digest create, and physical markup expression of this external document is already incorporated in this first document. This digital digest is a compound digest.

[0024] In order that this invention may generally form the identifier for distinction of the meeting of data which has main documents, one piece, or an auxiliary document beyond it in another side, in the computer program which exists on the medium in which read is possible, a computer is carried out by computer. The computer program which has the instruction which makes the identifier for distinction create is offered by summarizing each auxiliary document, and making each auxiliary document digest create, and summarizing connection in these main documents and all auxiliary document digests. This program carries out a computer and has the instruction to which a digital digest algorithm is made to apply. This digital digest algorithm is an MD5 message digest algorithm.

[0025] Generally in another side, this invention carries out a computer in the computer program which exists on the medium in which read is possible by computer for searching the document transitively linked to the document of the beginning on a hierarchical file system. Make the document of this beginning search, and the transitive link from a document to the other documents of this beginning exists, and make only the other documents with which all these transitive links include the document with which it exists in the same directory path as the document of this beginning search. The computer program which has the instruction is offered. The suitable example of this invention has more than one or it of the following features. This hierarchical file system is distributed on the network. This hierarchical file system is distributed on the Internet.

[0026] There is one or the thing beyond it indicated below as an effect of this invention. It is possible to unify the web page indicated by semantics-markup languages, such as HTML, in the single document which is indicated by physical markup languages, such as PDF, and which carried out page attachment. As for a web page, it is possible to make it change into the format with the fixed page size, without losing information for a spatial constraint. It is possible to create a peculiar single identifier as a matter of fact to a main document and a related auxiliary document. It is possible to search all the documents that are linked to one document and exist in the same directory path from a file system.

[0027]

[Embodiments of the Invention] Reference of drawing 11 has connected the user computer 100 which is working client software to a web server like a web server 140 through a communication link 102. The web server is linked to the data storage section like the data storage section 142 containing a web page like a page 144 (static or dynamic). Client software (it can include one piece or another program beyond it, a plug-in module, and operating system extension) displays information on a display unit like a monitor 104 typically, and receives a user's input from a keyboard (un-illustrating) and cursor location arrangement equipment like a mouse 106. The computer 100 is programmed to generate movement to which the cursor graphic as which movement by the user of a mouse 106 is displayed on the display 104 usually corresponded.

[0028] Programming of a computer 100 receives positional information from a mouse 106, and has the interface 108 which supplies it to the application program which is working on a computer 100. A web browser 110 and the PDF viewer 120 are in such an application program. Moreover, on a computer 100, the web page integrator 135 is working and it can be carried out to a part of PDF viewer 120. A demand is answered from a user and a PDF viewer can require making the document of others which are linked directly or indirectly to the first document specified by URL supplied by the user and the document of this beginning to the web page integrator 135 from the web server beyond one or it (for example, web server 140) search. If the demanded document is searched, as for a web page integrator, they will be unified into a single PDF document, and, subsequently it will be displayed by the PDF viewer 120.

[0029] The PDF document displayed by the PDF viewer can have a hyperlink to the internal page in

a PDF document while having a hypertext link to a web page. The page is displayed by the PDF viewer, when a user chooses the hyperlink in a PDF document with a mouse and the link is a thing to one page in this PDF document. However, when the hypertext link is a thing to a web page, depending on the mode set up by the user, the page is displayed by the browser, is unified into a PDF document, and is displayed by the PDF viewer.

[0030] Drawing 12, and 12a and 12b are the flow charts of the method of incorporating a web page into the single document which carried out page attachment, and explain the case where it realizes in the programmed computer system. A user is questioned that a system gives the name or existing URL, and existing web crossing criteria of a PDF document in the first place to a user (Step 200).

When a user gives the name of a PDF document, the document turns into a "target document" (Step 210). The target document is displayed in a PDF viewer, and stands by a user input (Step 220).

When a user gives URL and web crossing criteria, the PDF document of a new sky is drawn up. This document turns into a target document. The parameter of a target document is set up, and it follows for any of the input from a default or a user being, and specifies the target width of face and the target height (intensively "target size" of this document) of a page in the document. Subsequently, the document of others which a FetchAndIncorporate (fetch AND OIN condominium rate) routine is called, and it is linked to the initial-statement document specified by URL and this initial-statement document, and satisfy web crossing criteria is incorporated into a target document (Step 230).

Subsequently, a target document is displayed by the PDF viewer and a system stands by a user input (Step 220).

[0031] The page of a target document is usually displayed with those target sizes, i.e., the size of the page specified by those PDF encodings. However, it is possible to display this page with those "natural sizes" by demand of a user. Although it has the same aspect ratio as a target size, the thing of a size with the minimum width of face required to display the web page incorporating width of face equal to the much more big thing of these target width of face and its page in a browser is meant as the "natural size" of a page.

[0032] If a user chooses a hypertext link (Step 235) and drawing 12 a will be referred to, the link will be inspected, and it will determine whether be that in which it carries out the point to the document already incorporated into the target document (Step 240), and will come out so, and, in a certain case, the page of the target document corresponding to the document incorporated before will be displayed by the PDF viewer (Step 250). When that is not right, the value of Incorporate? which is the flag which a user can set up is checked, and (Step 260) one of the following steps is performed.

[0033] When an Incorporate? flag is FALSE (false), a standard web browser program is supplied with the instruction for URL specified by the hypertext link displaying the document corresponding to the URL (Step 270).

[0034] When an Incorporate? flag is TRUE (truth), a FetchAndIncorporate routine is called with the web transection criteria of specifying only URL and the document relevant to the URL being searched (Step 280). Consequently, one piece or the page beyond it is created in the target document corresponding to the document specified by the URL. Subsequently, the first thing of these pages is displayed by the PDF viewer (Step 290).

[0035] A demand of that a user will raise the form contained in a target document if drawing 12 is referred to again offers the content of this form to a proper server, as shown in drawing 12 a (Step 310). (Step 300) The web document which answered offer of form and was received from the server is displayed in a web browser, is incorporated into a target document by the ConvertToPDF procedure (it explains in detail below), and is displayed by the PDF viewer according to the value of an Integrate? flag (Step 320) (Step 340).

[0036] The following steps are taken, when a user will choose the point on the server side image map in a target document, if drawing 12 is referred to again (Step 350). (When a user chooses the arbitrary points within this image using pointing equipments, such as a mouse, a server side image map) it is the thing of the image displayed in a browser to answer when it is provided to the server which the coordinate of the point within the image specified and this server sends a document to a browser the first -- and if drawing 12 b is referred to, division of the coordinate chosen by the user will be carried out by the value of the variable ScalingFactor connected with the page displayed now (Step 360) Variable ScalingFactor expresses the amount which decreased the size of the original



[0048] Drawing 14 is the flow chart which showed the step taken by the FetchDoc routine. Specified URL is checked in order that it may distinguish whether it is a thing corresponding to the document from the web already incorporated in the page of a target document (Step 600). URL can be dealt with the appearance. URL is because the document before incorporated as a page of a target document is referred to, or is because it was discovered before as a thing equivalent to URL which refers to the document incorporated in the page of a target document so that it might explain still in detail below the page which comes out so and corresponds from a target document in a certain case - a return - that is, it is returned (Step 610)

[0049] When that is not right, the demanded document ("main documents" is called in this book) is searched from a web server (Step 620). It comments on URL of all the auxiliary documents that the scan of the main documents should be carried out, and should be contained in the display of main documents (Step 630). (when it exists) In the case of the HTML document which is not a frame set, this auxiliary document may include an image (picture) document. In a frame set, these auxiliary documents include the document which supplies the content of a frame.

[0050] To each URL which refers to an auxiliary document, when this auxiliary document is an image document, URL determines whether refer to the already searched document in the page of a target document. This is performed by comparing URL with the list of image documents for URL reference before incorporated in the target document. URL may appear on this list. It is because it refers to the image document before incorporated in the target document, or is because it had become clear beforehand that it is equivalent to URL which refers to the image document incorporated before in a target document so that it might explain still in detail below. It comes out so and, in a certain case, indirect referring to the object to a corresponding image is searched from a target document (Step 640). When that is not right, the auxiliary document discriminated by URL is searched from a web (Step 640). Numerical "digest" is created to each auxiliary document searched from the web using an algorithm for a nonlinear digest (summary) like the MD5 digest algorithm indicated in RFC1321 document and MD5 message digest algorithm which were announced by Internet Engineering Task Force (Step 650). The digest created by applying MD5 to this document is a numeric value with very little probability generated by applying MD5 to a different document. Therefore, it acts to the document as a "signature" unique as a matter of fact for discernment.

[0051] This digest value is compared with the digest value over the document already incorporated in the page of a target document to each auxiliary document which is an image document. If coincidence is found, it will be arranged in the equivalent class which has URL connected with the image whose URL to an auxiliary document the searched image document was discarded, and referring to the indirect object to the document was searched from the target document instead, and corresponded (Step 660). As an option, URL in an equivalent class can carry out mark attachment with a due date, and it means that they should be removed from an equivalent class after the date. Since it is possible to perform this, there are no thing and bird clapper which refer to resources with the probability of changing with time and whose URL "is stale."

[0052] Although it is what should be careful of, it is usual that it is that in which separate URL carries out the point to the same or same content lexically on a web. By using a numerical digest, space is saved by avoiding incorporating the page and image of a duplicate in a target document.

[0053] Reference of all the auxiliary documents creates a new digest by applying a digest algorithm to connection by all the digests of an auxiliary document, and the content of main documents (as indirect reference to the content before incorporated in the target document from the web) (Step 670). The "compound digest" obtained as a result is a digest of main documents.

[0054] Using not a simple digest (namely, digest of the contents of only main documents) but the compound digest of main documents gives the advantage of performing distinction between the main documents used as the display of contents which are different although it is the same in text. For example, the auxiliary document in a HTML document can be specified as relative reference. That is, URL can specify a document name, without specifying a server name or a directory name. Such relative reference is interpreted as reference to the document on the same server as the document with which the reference was formed, and in the same directory. Therefore, when found on the host from whom they differ, refer to the different auxiliary document in fact for two main documents which have the same relative reference to an auxiliary document.

[0055] The main documents same in text may adopt different how to an observer to appear, when searched in the time when they differ again. The contents of the auxiliary document referred to with this document are because it may change with time.

[0056] Using a compound digest makes it possible to compare with the existing target document page efficiently, before determining whether deal with these main documents for the contents of both a main document and its auxiliary document as a duplicate object of these pages.

[0057] Subsequently, the compound digest of main documents is checked and it distinguishes whether it corresponds to the digest of which web document before incorporated as one page or two or more pages of a target document (Step 680). It is arranged in the equivalent class which has URL connected with the document incorporated before these main documents were discarded, and the page of the target document corresponding to the web document incorporated before was returned and URL to these main documents was in agreement, when that was right (Step 660). the auxiliary document relevant to [ when that is not right ] it in these main documents -- a return -- that is, it is returned (Step 700)

[0058] Drawing 15 is the flow chart which showed the step of a ConvertToPDF routine. A ConvertToPDF routine takes a non-PDF document and its auxiliary document as an argument. First, main documents are checked and it is distinguished whether it is a HTML document (Step 800). When that is not right, it is incorporated in a target document using the usual technology (Step 810). (namely, when it is the document of the type of some others, such as for example, an image document)

[0059] When main documents are HTML documents, this main document and an auxiliary document use standard parsing (syntax analysis) technology, and analyze syntax to the Perth tree (parce tree) of a screen object (for example, the document body, a table, a list, an image, a paragraph) (Step 820). Such technology is indicated by an Aho and Ullman work "principle (Principles of Compiler Design) of compiler design" AJISON UEZURI publishing company, and the reference of 1977.

[0060] Next, a LayoutRegion data structure is created. A LayoutRegion data structure expresses the fixed width-of-face stripe through a specific PDF document. This LayoutRegion data structure has Pointer curY further, and it pinpoints the present vertical position in the document with which a layout should be performed. The LayoutRegion data structure has the page size information that the width of face and the height of a PDF page which it refers to are expressed further. the fixed vertical position [ in / the edge of the left-hand side of LayoutRegion, or right-hand side / the LayoutRegion data structure has the list of the so-called "floating images" further and / in this floating image ] -- it should occupy -- the screen object of others / surroundings / of it ] being demarcated / and / -- a flow -- that is, it flows Drawing 16 shows typically the layout field 830 currently used in order to arrange some lines of a text 840 and to arrange four images 850 in two successive PDF pages 860.

[0061] If drawing 15 is referred to again, LayoutRegion will be formed, therefore the point of the curY will be carried out to the bottom edge of the page which exists in the last of a target document. (According to custom, the arbitrary PDF screen objects arranged in this position appear in the upper part of the page of the following \*\*. ) The range of the left-hand side of LayoutRegion and right-hand side is set up equally to the width of face of a request of the page in a target document. Page height and width-of-face information are set up equally to the page size of a target document (Step 870).

[0062] Next, a LayoutElement routine is called. A LayoutElement routine takes a HTML screen object (for example, frame set, table, document, paragraph, or image), LayoutRegion, and RenderPDF? flag as an argument. the size actually needed in order that LayoutElement may arrange a screen object, i.e., width of face, and height -- a return -- that is, it returns When RenderPDF? is TRUE (truth), LayoutElement performs the attempt which creates the contents in the target document corresponding to the HTML object. This process is explained still in detail later.

[0063] LayoutElement is first called with the Perth tree newly created as an argument of the RenderPDF? value of a main HTML document, the auxiliary document and newly created LayoutRegion, and FALSE (false) (Step 880). The minimum width of face and height required to display completely all the screen objects by which LayoutElement is specified in the Perth tree with those usual sizes as RenderPDF? is FALSE (false) are calculated. In addition, the thing of the "logical minimum width of face" of the HTML object expressed as this width of face by the Perth tree is meant.

[0064] Subsequently, a return, i.e., the width-of-face value returned, is compared with the target width of face of a target document by LayoutElement (Step 890). The returned width-of-face value is under the width of face of a target PDF page, or when equal, adjustable [ ScalingFactor ] is set equally to 1 (Step 900), and it is reset so that the value of curY in LayoutRegion may become equal to the bottom edge of the page of the last of a target document (Step 910).

[0065] The following steps are taken when the width-of-face value returned by LayoutElement is larger than the width of face of a target PDF page. ScalingFactor is calculated by carrying out division of the target width of face of a target document with the returned width-of-face value (Step 920). When ScalingFactor is larger than about 0.7, (Step 930) and new LayoutRegion are created, and it is defined as page height and width of face becoming equal to the page size of the target PDF page in which division was carried out by ScalingFactor, and is set up that curY should carry out the point to the bottom edge of the page of the last of a target document, and the width of face of LayoutRegion is set up equally to newly defined \*\*\*\* (Step 940).

[0066] When ScalingFactor is less than about 0.7, a LandscapeView? flag is set as TRUE (truth). New ScalingFactor is re-calculated by carrying out division with the width-of-face value to which the target height of a target document was returned. When the value acquired as a result is larger than 1, it is set up equally to 1. Subsequently, new LayoutRegion is created, page height and width of face are demarcated in that case equally to the complementary page size (also height and its reverse \*\*\*\*) in which division was carried out by ScalingFactor, and curY is set up that the point should be carried out to the bottom edge of the page of the last of a target document, and the width of face of LayoutRegion is set as newly demarcated \*\*\*\* (Step 950). [ as opposed to / width of face / Namely, ]

[0067] (In another example, a user can specify the value of the threshold where a LandscapeView? flag is set as TRUE (truth), and he can also be specified so that a LandscapeView? flag may not be further set as TRUE (truth)) Next, LayoutElement is called again and called with the RenderPDF? value of the Perth tree, newly created LayoutRegion, and TRUE (truth) at this time. The scaling of all the PDF pages generated by the call to LayoutElement is carried out by ScalingFactor, and they transform them to the size of the page in a target document by it. ScalingFactor is stored with each page for future reference. (For example, when a user requires that a PDF page should be expressed as the "natural size", division of the size of a PDF page is carried out by ScalingFactor, and it returns the page to the natural size by it.) When LandscapeView? is TRUE (truth), only 90 degrees of each of the PDF page generated by the call to LayoutElement rotate (Step 960). From ConvertToPDF to subsequently, \*\*\*\*\* (Step 970)

[0068] Drawing 17, and 17a and 17b are the flow charts which showed the step taken by the LayoutElement routine. First, Variable MinWidth is made equal to the width of face of LayoutRegion, and, as for Pointer startY, the value of curY is assigned (Step 1000). Subsequently, the type of the HTML object expressed by the Perth tree is determined. When the object is the content object of a non-structured type (Namely, when it is the object as for which internal structures, such as a paragraph, a form element, or a header, only consist nothing of a text and an image) (Step 1010) LayoutElement The width of face of the broadest element in the object By determining namely, (the broadest word or the broadest image), the logical minimum width of face of the object is calculated, and when this width of face is larger than MinWidth, MinWidth is set as the width of face (Step 1020).

[0069] When RenderPDF? is TRUE (truth), the object is arranged in a target document in the position by which the point is carried out by curY. Although it is what should be careful of, if the object is displayed, it may take two or more lines on a page. for example, when this object is one paragraph of a text this text makes the present line full, and continues, presupposes that an additional line is full, and it is arranged so that many words may be arranged as much as possible on each line When it seems that arranging this object arranges a part of this object exceeding the end of the present page in the position by which the point is carried out by curY It distinguishes whether an additional PDF page exists in the target document below the position expressed by curY. It is created when such a page does not exist. this object -- this -- although completely arranged on an additional page, in being small enough, it completes now When that is not right, this object is arranged across the boundary of a page, and when possible, a character or an image is made not to be arranged across



the boundary of a page. Subsequently, the increment of the pointer curY will be carried out and it will carry out the point to the position immediately under the arranged object (Step 1030).

[0070] Subsequently irrespective of the value of RenderPDF?, the increment of the value of curY is carried out by the height of this object (Step 1040).

[0071] the difference between the value of MinWidth, curY, and startY -- a return -- that is, it is returned and the dressed size of a screen object is expressed (Step 1050) When this object is the body of a list or list-like object (for example, a menu, the list which carried out turn attachment, or a directory list), or a simple document (that is, it is not a frame set), (Step 1060) and the following steps are taken. To each element of the list of [ in the body of this document ], or a screen object, a LayoutElement routine is called and a list element or a document screen object, the present LayoutRegion, and the value of RenderPDF? are called as an argument. When the width-of-face value returned to such each call is larger than MinWidth, MinWidth is set as the value (Step 1070). after such all elements or screen objects were processed in such a mode -- the value of MinWidth, and the difference between curY and startY -- a return -- that is, it is returned (Step 1080)

[0072] When this object is a table, (Step 1090) and the following steps are taken. If drawing 17 a is referred to, it will be set up so that equally to MinWidth with overall table field width (Step 1110). (The relative width of face of each column is determined according to the HTML table gestalt information given with a HTML table markup.) Each of the cell which starts from the first line (Step 1120) and is subsequently started in the line to each line in this table is sequentially processed as the following (from the left to the right). Although new LayoutRegion is created with the current value and the present page size of curY, the boundary of left-hand side and right-hand side is determined by the range of the left-hand side of the column which should be occupied by the cell, and right-hand side. Subsequently, LayoutElement is called with the value of the content of a cell, new LayoutRegion, and RenderPDF? as an argument (Step 1130).

[0073] The following steps are taken after all the cells in one line are processed. That is, curY is set as the point of the highest thing bottom of the cell of the line (the cell which has a bigger line range than what carries out termination into the present line is included). Subsequently, the width of face (it defines as the sum of the width-of-face value returned by LayoutElement to all the cells that occupy the line) of the line is calculated (Step 1140), and processing of the following line is started in Step 1130. Thus, when the width of face of the line broadest [ that (Step 1150) and the value of MinWidth are compared with the width of face of each line after all the lines are processed ] is larger than MinWidth, MinWidth is set up equally to the width of face of the line (Step 1160). The value of MinWidth and the difference between curY and startY are returned (Step 1170).

[0074] The following steps are taken, when drawing 17 is referred to again and this object is a frame set. Reference of drawing 17 b determines temporary width of face and a temporary position to each frame in a top-level frame set based on the frame width-of-face information specified in the value of MinWidth, and this frame set. (For example, when a top-level frame set demarcates a level frame, the width of face with each temporary frame is MinWidth.) When a top-level frame set demarcates a perpendicular frame the width of face with each temporary frame is determined by dividing the width of face specified by MinWidth according to the relative width of face of this frame so that it might be specified in a frame set Subsequently to each frame in a top-level frame set, it receives. New LayoutRegion is created, it has the width of face and the position where the existing page size and this frame are temporary, and curY is set up that the point should be carried out to the up edge of this frame (Step 1190).

[0075] Subsequently, when a top-level frame set includes a level frame, (Step 1200) and the following steps are taken. To the frame of each top level in this frame set, it starts from such first frame (Step 1210), LayoutElement is called, and the content of this frame, newly created LayoutRegion, and RenderPDF? are used as an argument (Step 1220). The increment of the value of curY is carried out after such each call by the height value returned by LayoutElement (Step 1230). When the width-of-face value returned by the call to LayoutElement is larger than MinWidth, (Step 1240) and MinWidth are set as the value, curY is reset equally to startY (Step 1250), and this process is newly started in Step 1190. After all the frames in a top-level frame set are processed by the appearance, (Step 1260), the value of MinWidth, and the difference between curY and startY are returned (Step 1270).



[0076] When the frame in a top-level frame set is a perpendicular frame, (Step 1200) and the following steps are taken. LayoutElement is called to the frame of each top level in this frame set by making the value of the content of this frame, newly created LayoutRegion, and RenderPDF? into an argument (Step 1280). After the frame of each top level is processed by the appearance, the sum of the width of face returned by each of the call to these LayoutElement(s) is tested (Step 1290). When this sum is larger than MinWidth, MinWidth is set up equally to the sum of this width of face (Step 1300), and this process is newly started in Step 1190. When that is not right, an increment is carried out by the highest thing among the height values to which curY was returned by the call to LayoutElement (Step 1310), and the value of MinWidth and the difference between curY and startY are returned (Step 1320).

[0077] Drawing 18 -21 has illustrated the result at the time of applying this method to a HTML document. It is the display in the web browser of the HTML document which consists of two frames 1410 and 1420 which was shown in drawing 18. Although the frame 1410 fits in a browser window mostly, a frame 1420 can be seen by using the slider for adjusting the position of the frame in a window, as it has extended across the pars-basilaris-ossis-occipitalis edge of a browser window and being illustrated to drawing 19. Drawing 20 and 21 show the PDF page of the lot generated by applying to the HTML document which showed this method to drawing 18 and 19. The frame 1410 sufficiently small although fitted on a single page is shown on the page 1440 with the portion of the beginning of a frame 1420 so that I may be understood. The remaining portion of a frame 1420 is displayed on a page 1450 and 1460. Although it is what should be careful of, the width of face of a frame 1420 is equal to the width of face of a graphic 1430, and it is a screen object which has the broadest logic swing in this frame.

[0078] Other examples are also the things of technical within the limits of this invention. For example, the turn of the step of this invention can be changed. It is possible to consider as pad type computers, such as a television [ of home use / it ], personal digital assistant, Internet sir FINGU, or special-purpose application product which can be considered as a single user or a multiuser platform. / a user computer A web page can be existed on a Wide Area Network, a Local Area Network, or a single file system. A target document can be considered as the document with fixed width of face which has not carried out page attachment. A target document can be considered as the document which has adjustable \*\*\*\* and which carried out page attachment. A web page can be considered as arbitrary semantics-markup languages rather than is required for being coded by HTML. A target document can be considered as arbitrary physical markup languages rather than is required for being coded by PDF.

[0079] As mentioned above, although the mode of concrete operation of this invention was explained in detail, it is natural [ this invention ] for various deformation to be possible, without not being restricted only to these examples and deviating from the technical range of this invention.

---

[Translation done.]

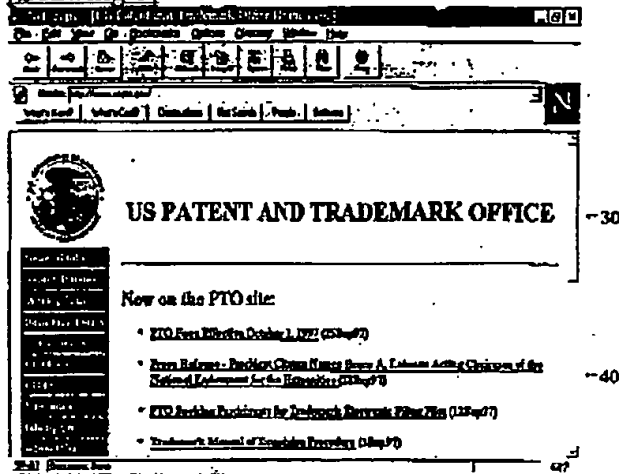
## \* NOTICES \*

Japan Patent Office is not responsible for any damages caused by the use of this translation.

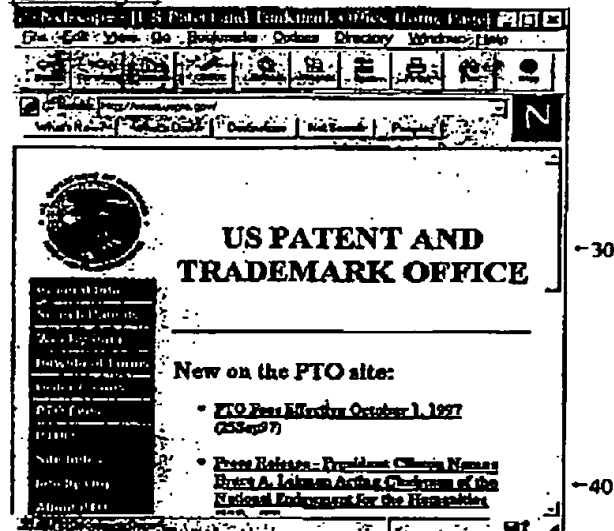
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

## DRAWINGS

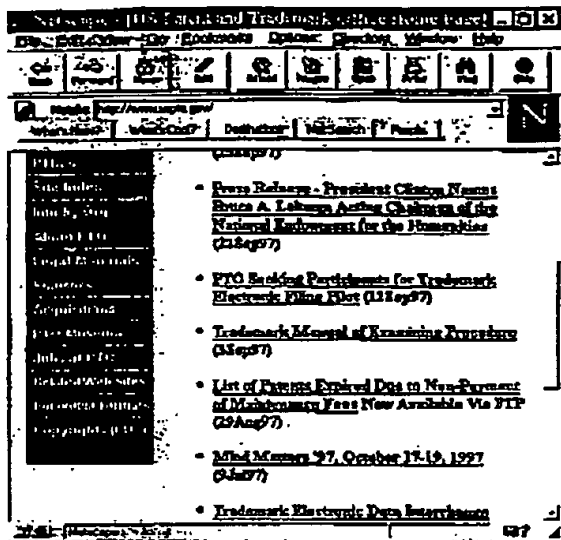
[Drawing 1]



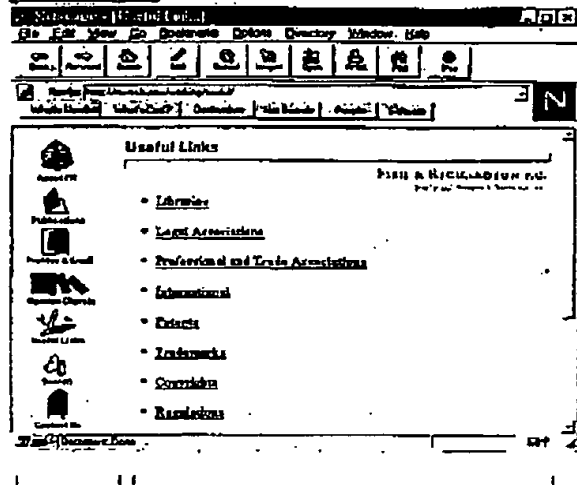
[Drawing 2]



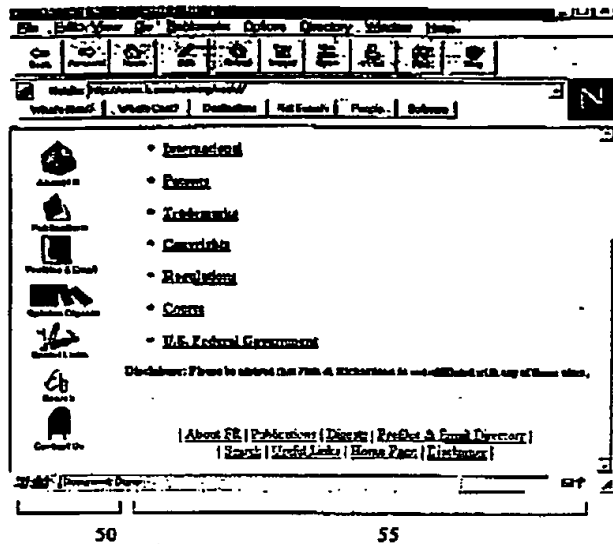
[Drawing 3]



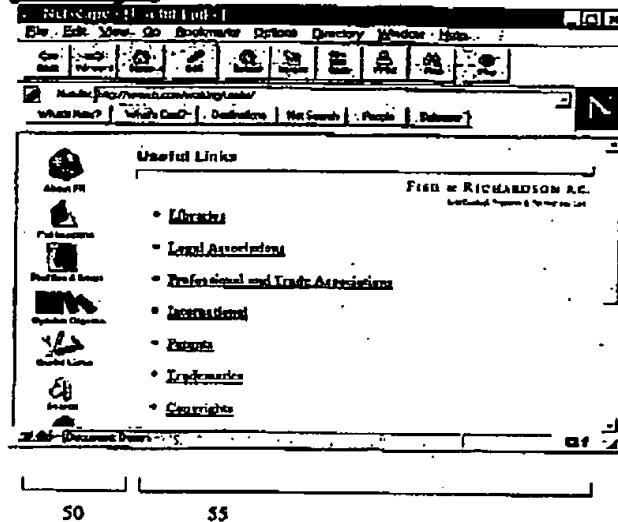
[Drawing 4]



[Drawing 5]

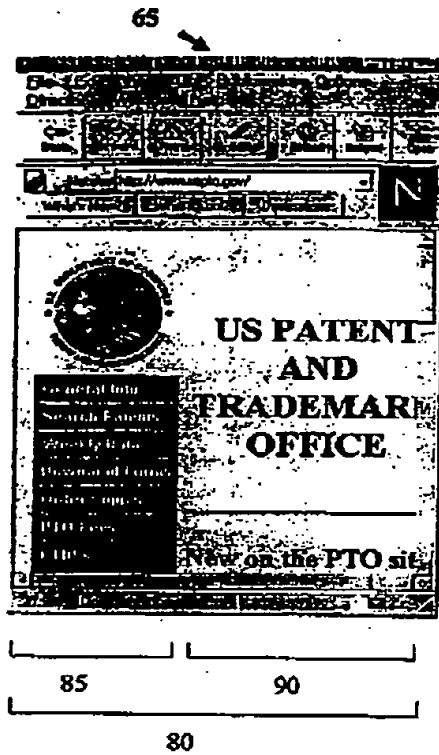


[Drawing 6]

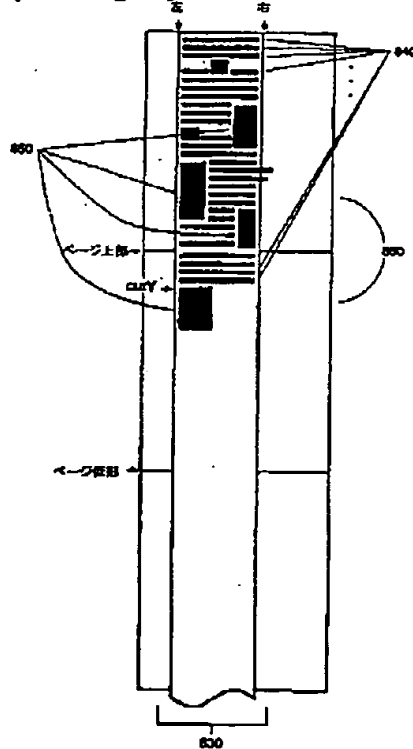


[Drawing 7]

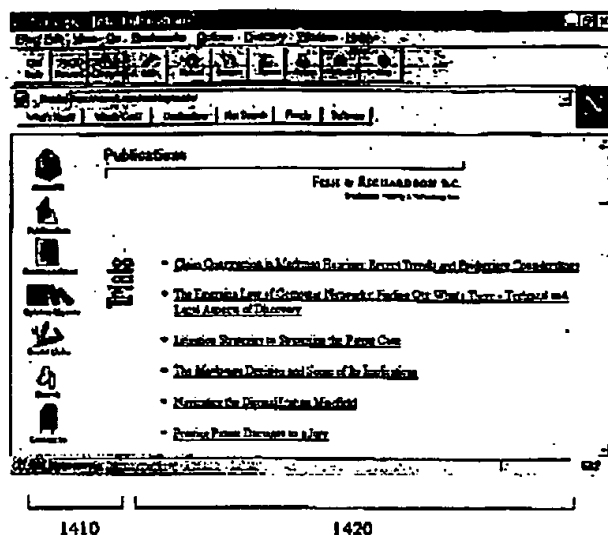




[Drawing 16]



[Drawing 18]



[Drawing 10]

```

<html>  

<head>  

<title><H1> PATENT AND TRADEMARK OFFICE Home Page</title>  

</head>  

<body bgcolor=white background="/web/qifs/canna.gif">  
  

<table>  

<tr>  

<td width=130 valign=top><IMG SRC="/img1.gif" border=no IFBw DTYPE="Obj1",  

OBJ1 DTYPE="Obj1">  

<AREA SHAPE="RECT" COORDS="1,172,117,163" HREF="/web/www/news.html">  

<AREA SHAPE="RECT" COORDS="1,164,119,168" HREF="http://patents.uspto.gov">  

<AREA SHAPE="RECT" COORDS="1,174,119,139" HREF="/web/www/patdata.html">  

<AREA SHAPE="RECT" COORDS="1,309,116,222" HREF="/web/torva/index.html">  

<AREA SHAPE="RECT" COORDS="4,326,116,347" HREF="/web/offices/ec/ido/cpr/ptcr/index.html">  

<AREA SHAPE="RECT" COORDS="4,252,117,272" HREF="/web/offices/ac/qa/ope/iss.html">  

<AREA SHAPE="RECT" COORDS="1,378,116,397" HREF="/web/offices/ec/ido/cpr/ptdlm3.htm">  

<AREA SHAPE="RECT" COORDS="1,354,116,323" HREF="/web/nvaida/site/index.html">  

<AREA SHAPE="RECT" COORDS="1,330,116,368" HREF="/web/www/offices.html">  

<AREA SHAPE="RECT" COORDS="1,358,116,373" HREF="/web/www/statul.html">  

<AREA SHAPE="RECT" COORDS="1,381,116,401" HREF="/web/www/maus.html">  

<AREA SHAPE="RECT" COORDS="1,407,116,478" HREF="/web/offices/ac/ido/cmp/qcsl/index.html">  

<AREA SHAPE="RECT" COORDS="1,433,116,413" HREF="/web/offices/ac/corp/prod/completions/index.html">  

<AREA SHAPE="RECT" COORDS="1,459,116,460" HREF="/web/offices/ac/shrpa/opa/minima/index.html">  

<AREA SHAPE="RECT" COORDS="1,488,117,407" HREF="/web/offices/ac/shrpa/cnr/employment/index.html">  

<AREA SHAPE="RECT" COORDS="4,311,116,332" HREF="/web/www/other.html">  

<AREA SHAPE="RECT" COORDS="1,537,116,556" HREF="/web/www/viewers.html">  

<AREA SHAPE="RECT" COORDS="2,561,116,581" HREF="http://web.loc.gov/copyright/">  

<AREA SHAPE="RECT" COORDS="3,346,117,407" HREF="/web/www/more.html">  

</table>  

<br>  

<td align=center><H1><br><br><br><font color=red>  

PATENT AND TRADEMARK OFFICE</font></td></tr>  

<tr><td></td></tr>  

<tr><td align=right><font color=cyan>  

<H1>  

<H1>New on the PTO site:</H1>  

<br>  

<UL>  

<LI><A HREF="/web/offices/ac/qa/ope/iss6.html">  

PTO Issues Effective October 1, 1997/<A> (12Sep97)</LI>  

<LI><A HREF="/web/offices/crm/speeches/index.html">  

Press Release - President Clinton Names Bruce A. Lehman  

Acting Chairman of the National Endowment for the Humanities  

/<A> (12Sep97)</LI>  

<LI><A HREF="/web/offices/tac/trasam.html">PTO Seeking Participants  

for Trademark Electronic Filing Pilot</A> (12Sep97)</LI>  

<LI><A HREF="/web/offices/tac/tmr">  

Trademark Manual of Examining Procedure</A> (12Sep97)</LI>  

<br>  

<br>  

<br>  

</UL>  

</td>  

</tr>  

</table>  

<br>  

<br>  

</body>  

</html>
```

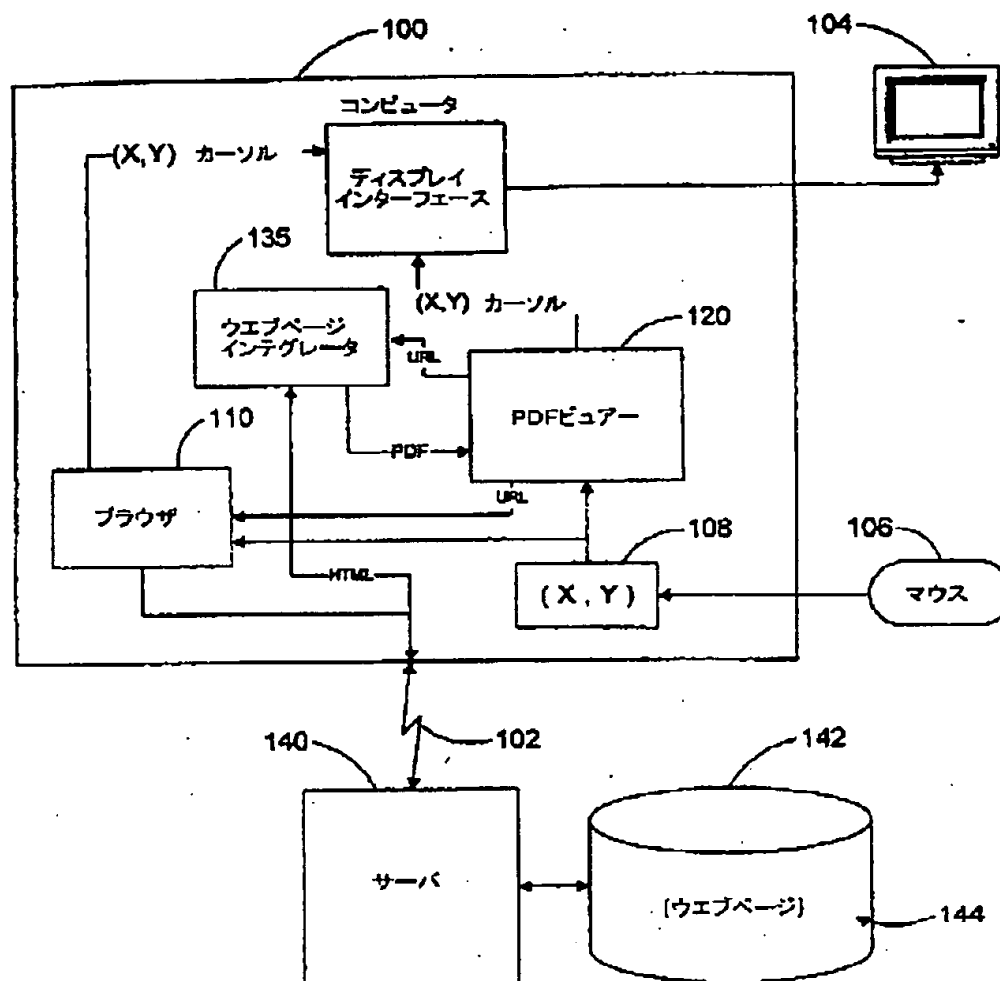
185

80

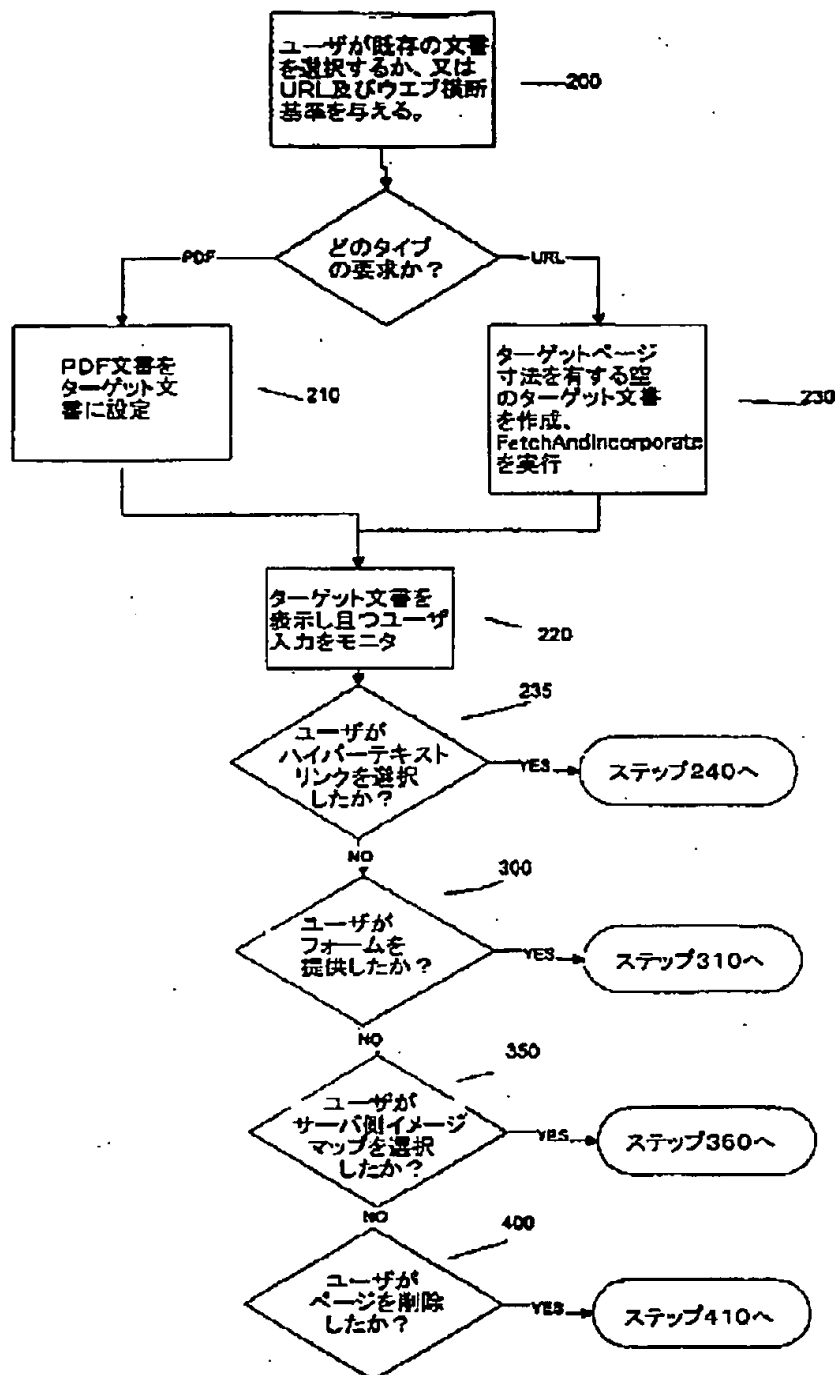
90

[Drawing 11]

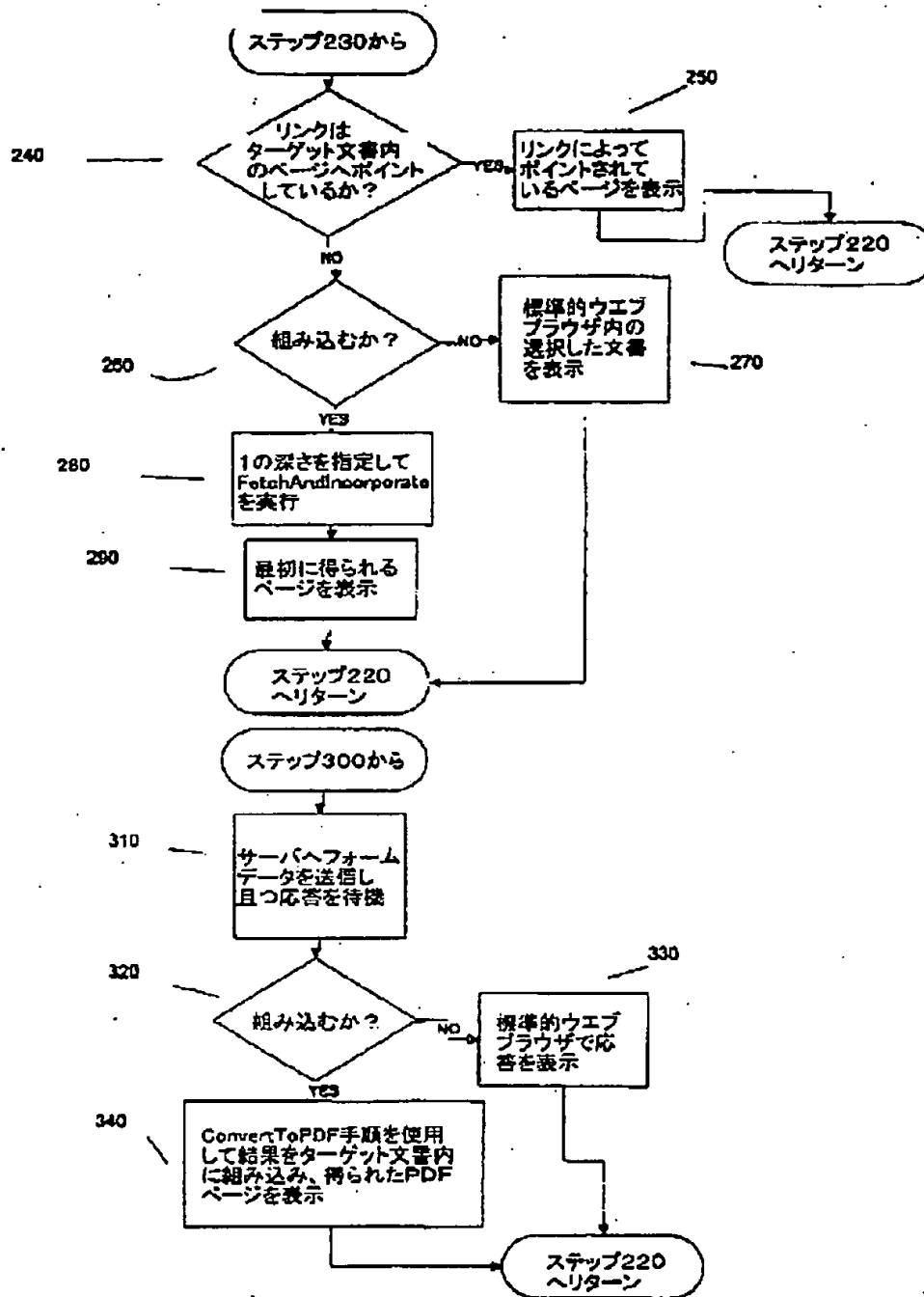




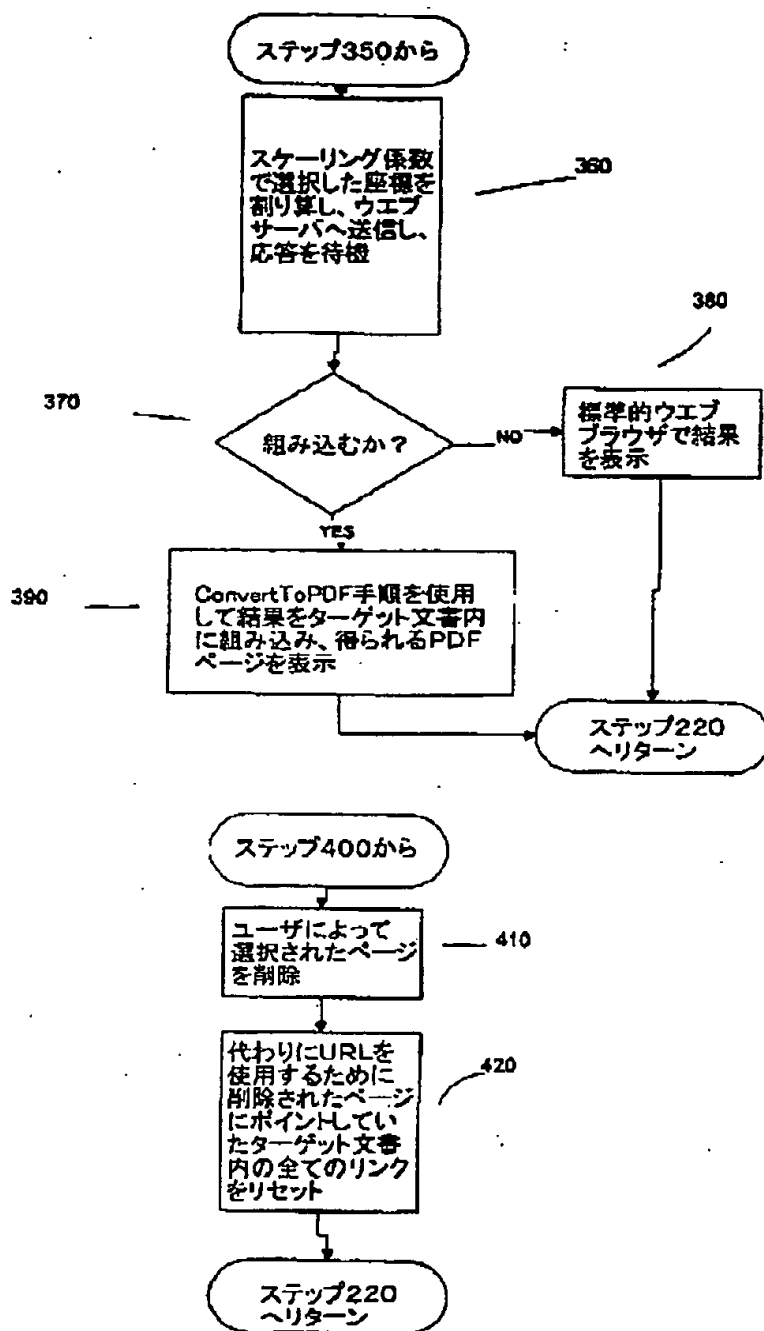
[Drawing 12]



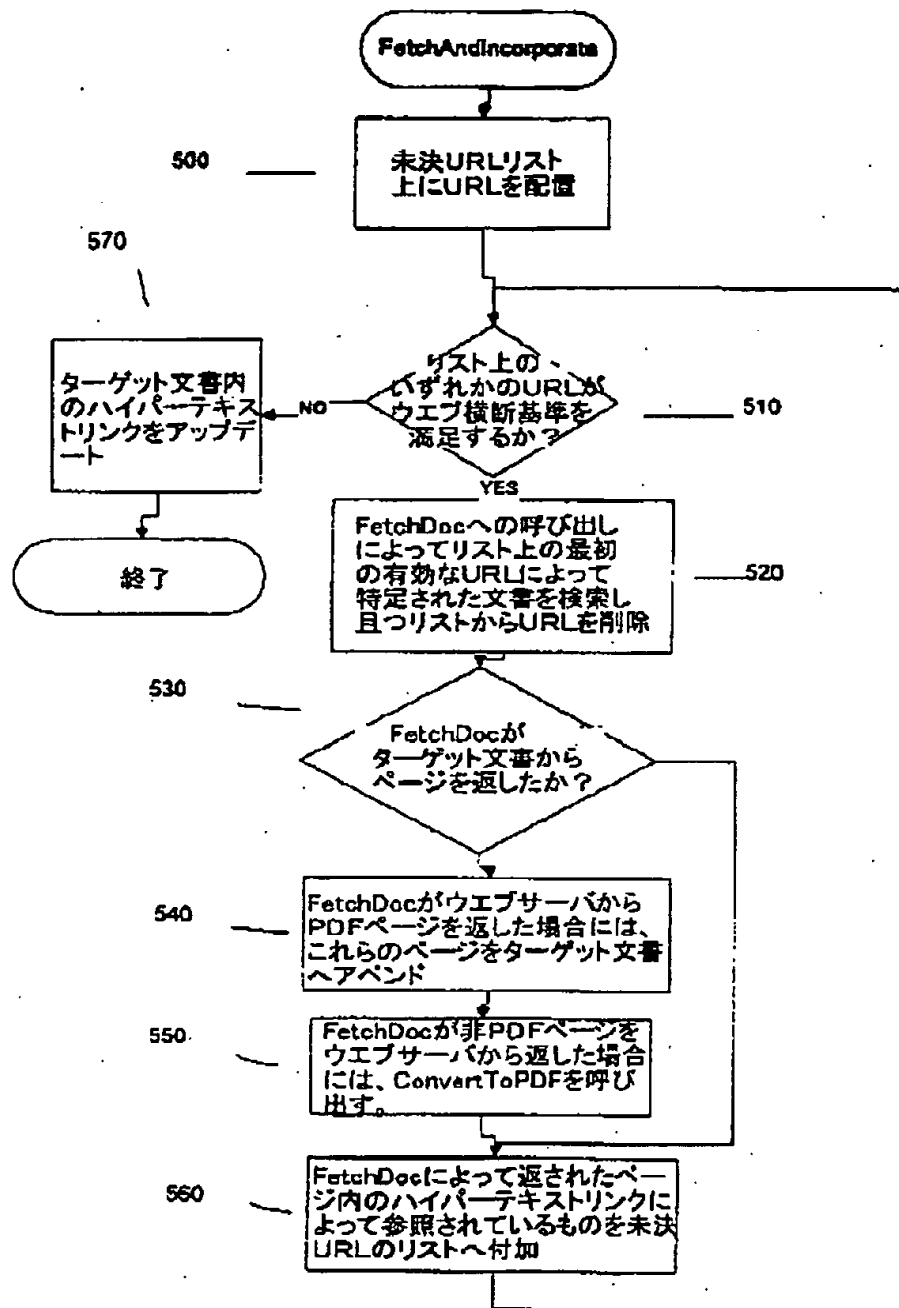
[ Drawing 12 a ]



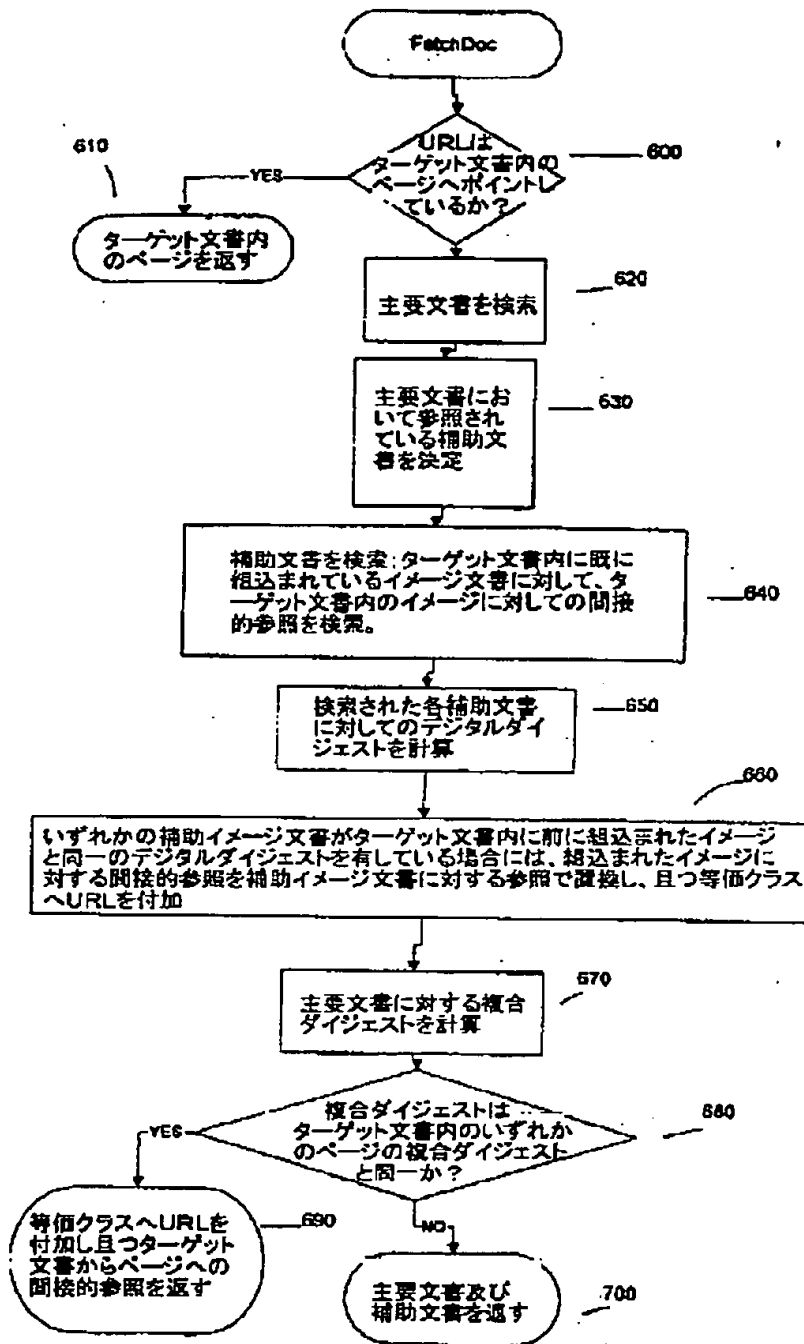
[ Drawing 12 b]



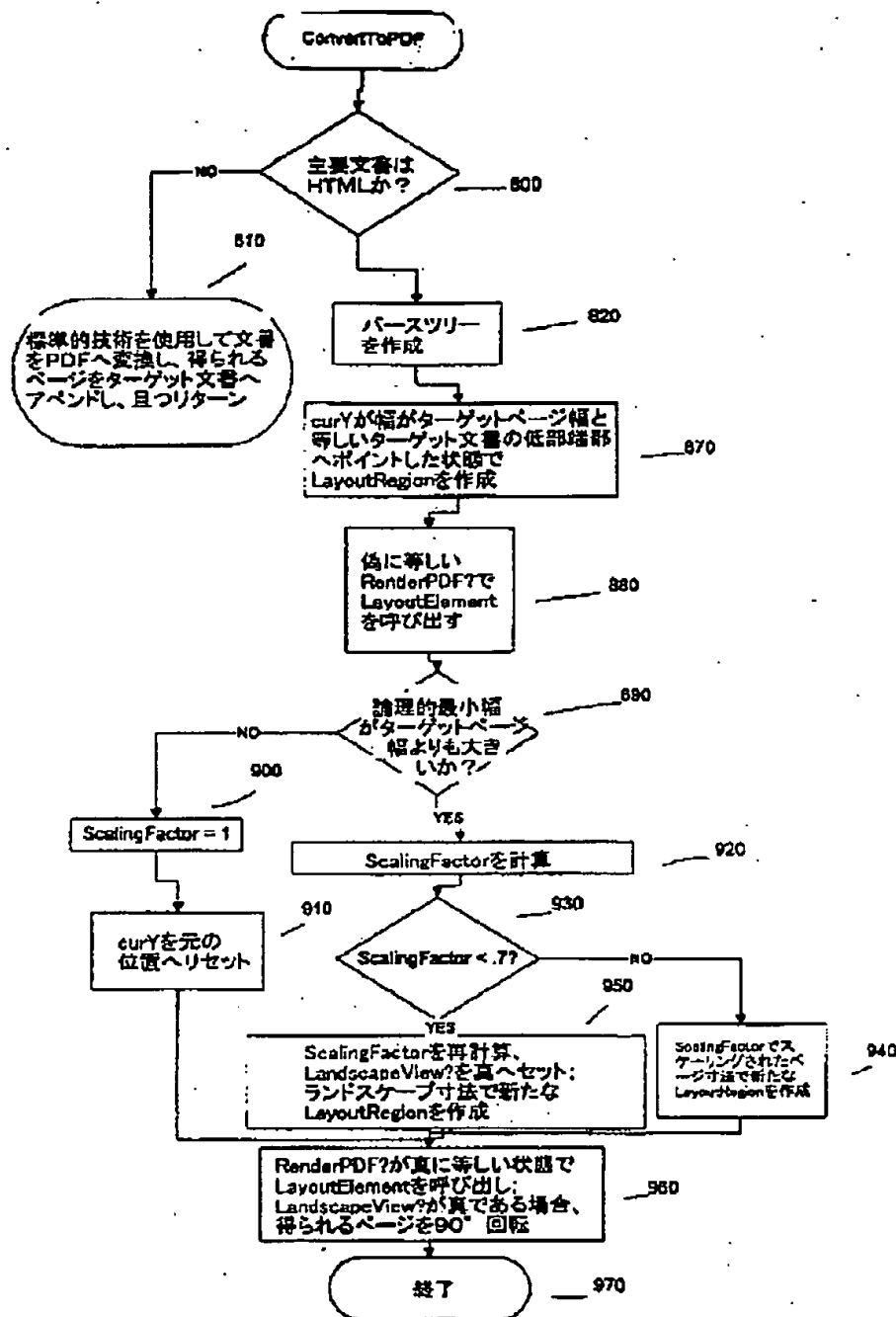
[Drawing 13]



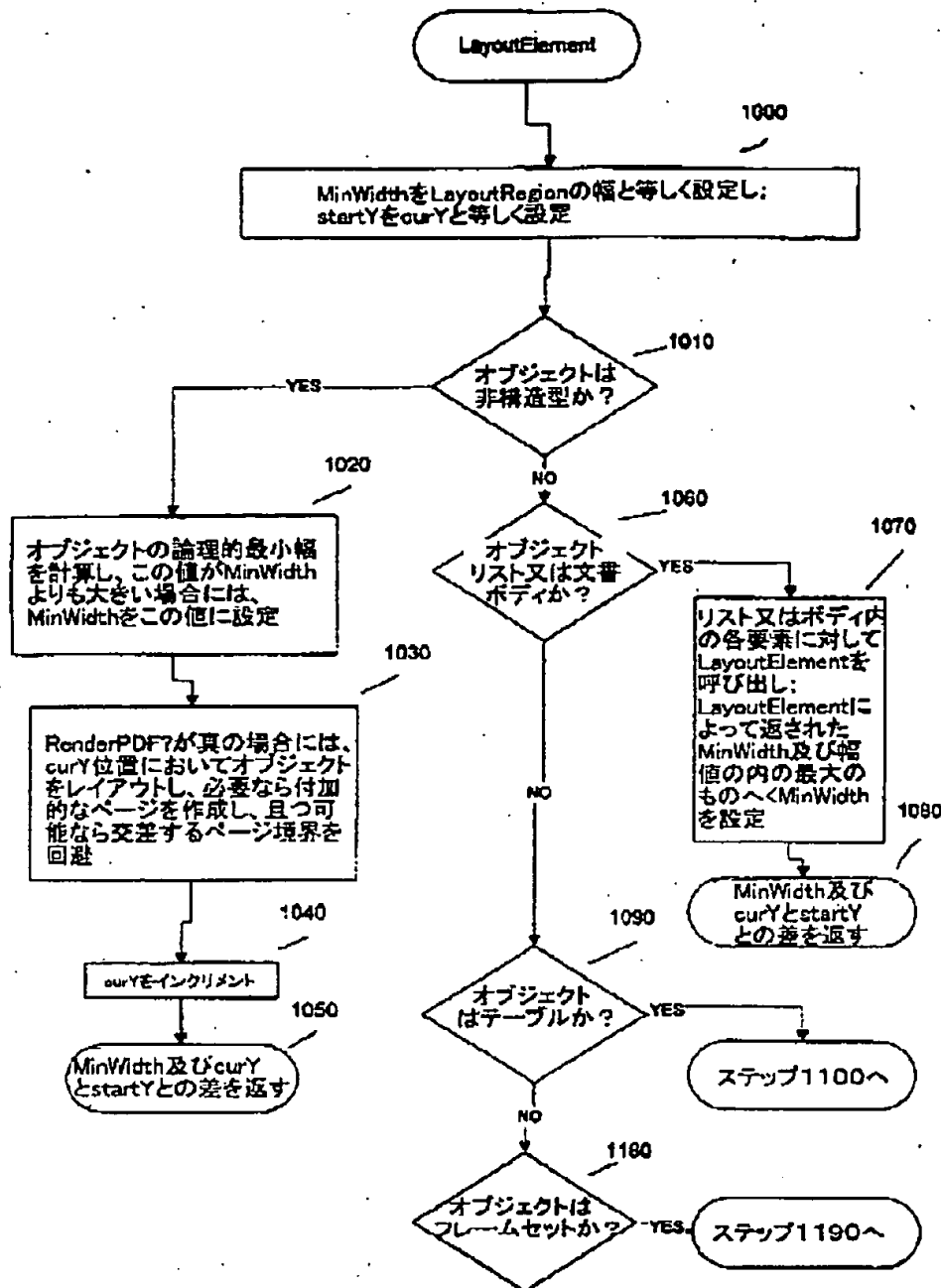
[Drawing 14]



[Drawing 15]

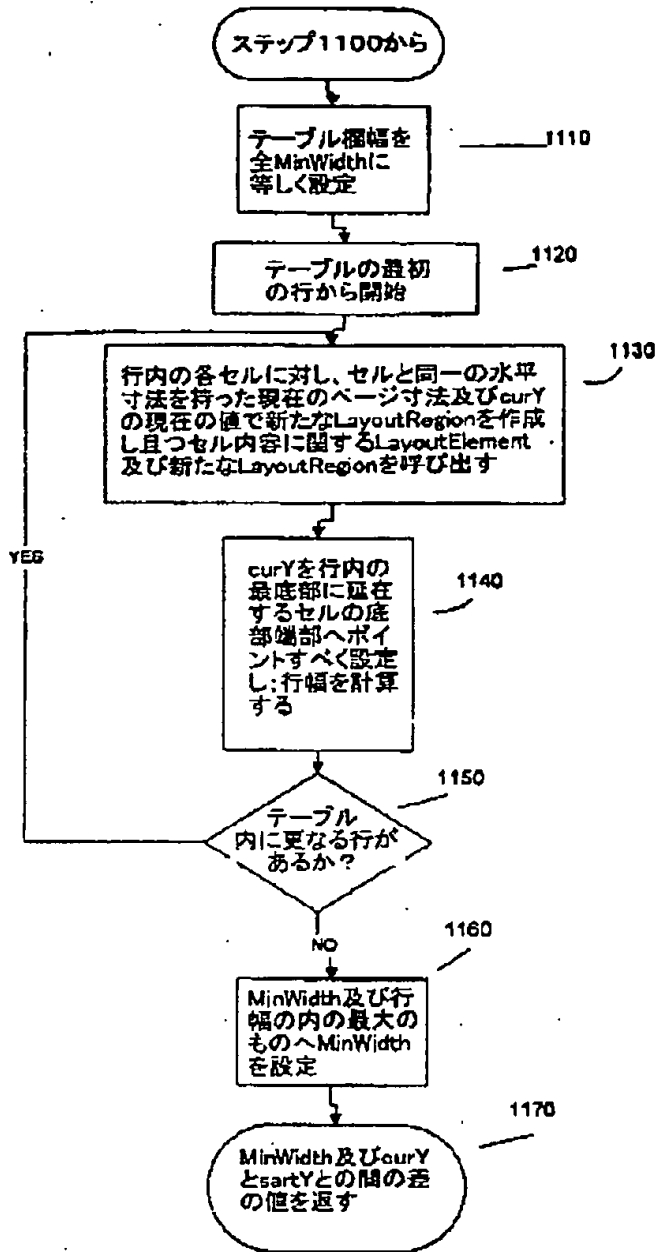


[Drawing 17]

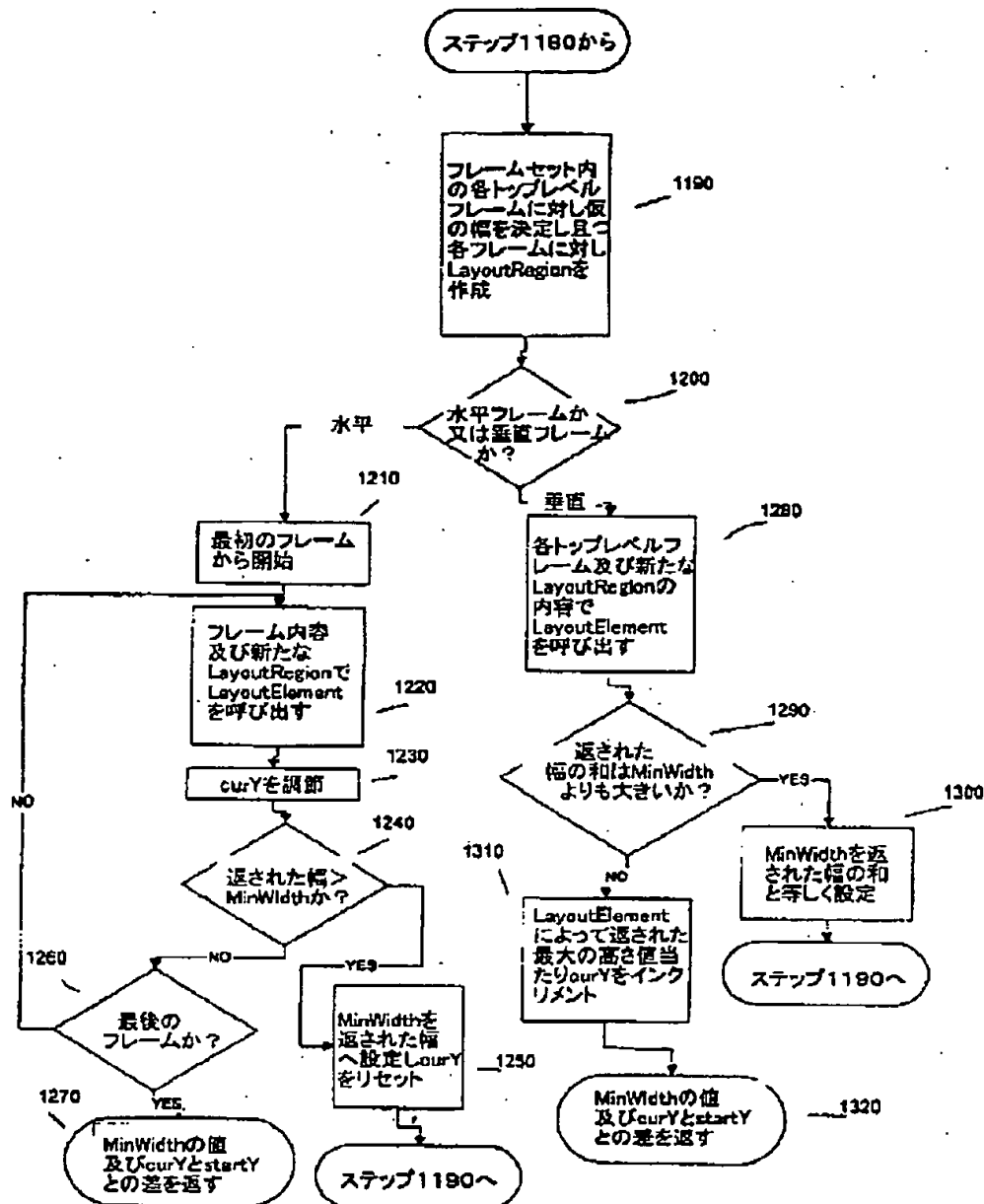


[ Drawing 17 a ]

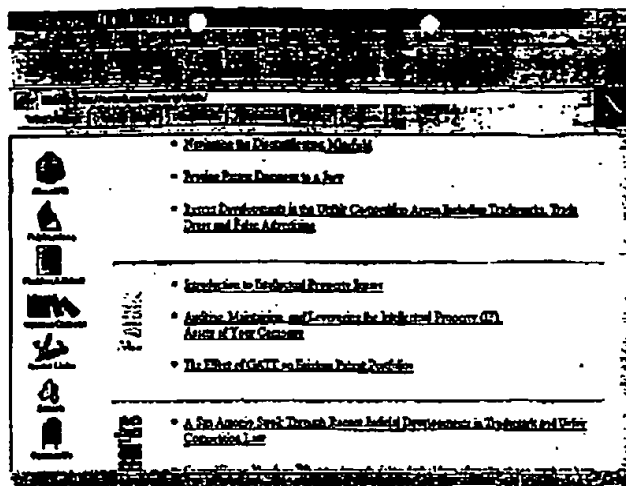




[ Drawing 17 b ]



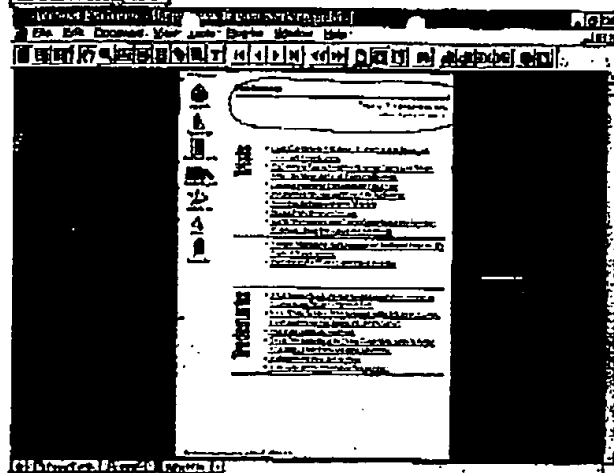
[Drawing 19]



1410

1420

[Drawing 20]

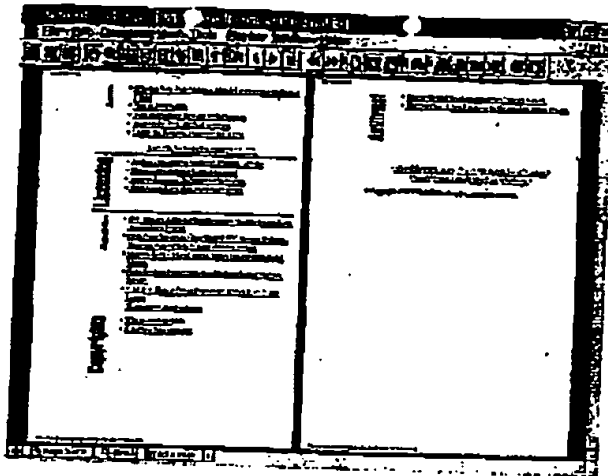


1440

1410

1420

[Drawing 21]



1450

1420

1460

1420

---

[Translation done.]